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62109
1949

GARDEN GUIDE

KNOX SEED CO.

509 E. Weber Ave.
STOCKTON 7, CALIF.

10 West Harding Way
STOCKTON 17, CALIF.

720 Tenth St.
MODESTO, CALIF.



New Flowers for 1949

"SOMETHING OLD, SOMETHING NEW"

is a good rule for the garden also. Every year there is a crop of new flower introductions which no up-to-date home gardener wants to miss. We have assembled here the most outstanding of the newest.

ASTER BALLETT QUEEN

ASTER BALLETT QUEEN.

This fine new color shade of deep rose touched with salmon assumes a soft bronze effect when the flowers are massed. Early and free-flowering, it is ideal as bedding and as cut flower. Wilt-resistant.

Packet 25c

MARIGOLD RED HEAD

(Dwarf Single French). Broad, overlapping, gracefully recurved petals around a wide, crested center of tiny, erect florets. Edges slightly curled. The blooms are first a rich, mahogany-red, changing to au-burn and later to bronze and gold. Dwarf, bushy, and free blooming.

Packet 25c

MARIGOLD RED HEAD

ASTER PRINCESS LINDA

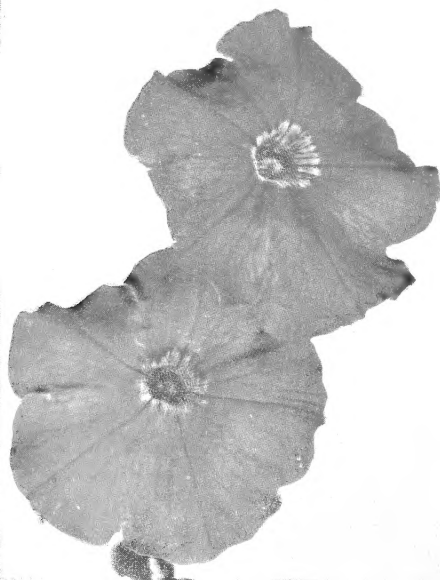
ASTER PRINCESS LINDA.

Linda brings, for the first time, a clear rose color into the already popular Princess type. The Princesses, with their deep crested centers and multiple rows of petals, are ideal as cut flowers and for bedding.

Packet 25c

NOVELTIES IN FLOWERS

are introduced every year; new shape and color combinations, like in the world of fashion. If you want that ever new look in your garden (and who wouldn't) you'll find the best of the newest offered in this catalog.



PETUNIA GLOWING ROSE

PETUNIA HYBRIDA NANA COMPACTA: GLOWING ROSE. This new single bedding Petunia produces mound-shaped plants completely covered with large glowing rose flowers.

Packet 50c



ANNUAL CHRYSANTHEMUM MERRY MIXTURE

Here is a new strain of Painted Daisies far superior to the old Tricolors. It includes new solid colors and also a better range of the Tricolors.

Packet 25c



SNAPDRAGON CHERRY ROSE

ANTIRRHINUM MAJUS GRAND: CHERRY ROSE. A distinctly new color. Long straight stems with long spikes of large, well-formed flowers make this variety ideal for cutting.

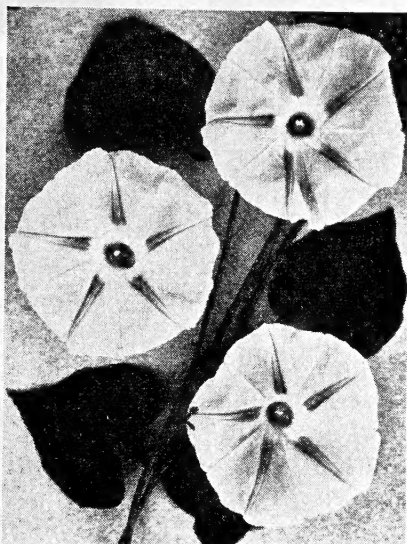
Packet 25c

More Flower Novelties for 1949

ON OUR FRONT COVER

SUPER GIANT ZINNIAS

come in a full range of rare and unusual shades of cream, buff, apricot, salmon, rose and orange, with fewer yellow reds and whites. Most impressive are the many two-toned and three-toned color effects in this new strain. Even the flower shapes vary from the long, narrow petals to the broad, curled and wavy, with some blooms deep as the Dahlia-flowered type. A most interesting blend and invaluable for cutting. **Mixed only. Pkt. 25c.**



MORNING GLORY, BLUE STAR

MORNING GLORY, BLUE STAR (Honorable Mention)

An entirely new color for Ipomea; a fine sky blue color accentuated by five deeper blue midribs to form an attractive star. The large flowers are produced profusely on the 8- to 10-foot vines. Early Blooming. **Pkt. 25c.**

PETUNIA—LITTLE GIANTS (Ruffled Nana compacta)

These 8- to 10-inch plants remain so compact and erect all season that this new variety is destined to become the most popular for the home garden. Ruffled, deep-throated, ball-shaped flowers of medium size continue to keep the plants completely covered all season. 3-inch blooms in unusual colors range from deep crimson to white in unique shades and markings. **Pkt. 35c.**

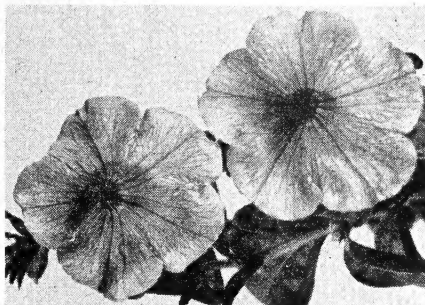


PETUNIA—LITTLE GIANTS

PETUNIA—GARDEN GIANT

For those who want medium-sized ruffled Petunias and plenty of them, this new introduction is just the thing. The blooms are about half the size of the California Giants, and they come early and plentiful on this compact and prolific plant. Yes, it is tough too; it can stand abuse and yet keep right on blooming.

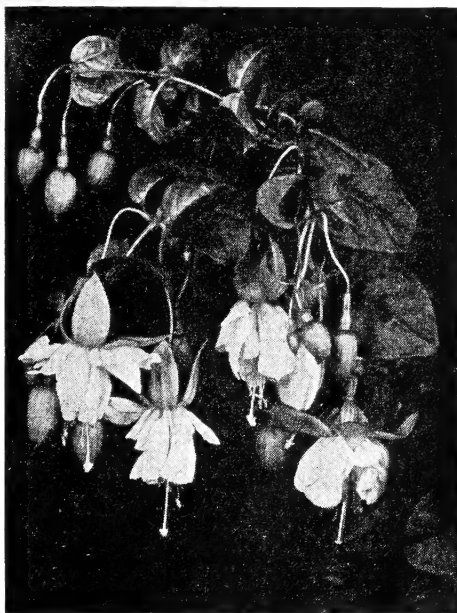
Mixed only. Pkt. 35c



PETUNIA—SILVER MEDAL

PETUNIA, SILVER MEDAL All-America Silver Medal Winner

Petunia Silver Medal is named for the award just bestowed upon it in the All-America Trials. Flowers, 3-in. across, are borne in the greatest profusion from early summer until frost. When first opening, they are a lustrous salmon-rose with orange undertone gradually changing to a delightful shade of rich salmon as they mature. Plants low and bushy, 10 to 12 in. tall with a spread of 18 to 20 in. Foliage mid-green. **Pkt. 50c.**



FUCHSIA SEED

Bodger's Superlative Mixture

Here is an excellent mixture of hand-pollinated seed of named varieties for the home gardener who wants to treat himself to the thrill of growing his Fuchsias from seed. **Pkt. 50c.**

MORE NOTEWORTHY ADDITIONS

For the first time offered here

Calendula (Sunset Shades). See page 5.
Gaillardia (Sunshine Hybrids). See page 7.
Four O'Clock (Petticoat). See page 7.
Sweet Peas (Cuthbertson). See page 14.
Zinnia (Early Wonder). Dwarf medium flowered. See page 15.

It's Easy to Raise Our Flower Seeds

We have grouped our seeds according to the culture they require. Find the group number in the alphabetical listing, for example, *Ageratum*, Grp. 2, and your cultural instructions in the column below.

Group 1 Seeds in this group are difficult to transplant. Sow the seed where the plants are to flower, after the danger of frost has passed. Thin out to the desired distance when the seedlings are well started.

Group 2 Seeds in this group are easily raised outside after the danger of frost has passed. Either sow them in their permanent positions or in a seed bed and transplant to the place where they are to flower.

Group 3 Seeds in this group can be sown outside very early in the season, being very hardy. When the seedlings are big enough they should be transplanted to their permanent positions.

Group 4 Sow seeds in flats in early spring for best results. When seedlings are large enough to handle transplant to other flats. Harden off gradually and plant into beds when the weather is settled.

Group 5 In this group are most of the perennial seeds. They can either be sown indoors in flats or outside. If sown outside it is good practice to sow them in mid-spring so they will reach a fair size before the hot weather starts. After the seedlings are big enough to handle, transplant to allow room for growth. Plant in their permanent places in fall or, if the plants are very small, winter over in a cold frame and plant out the following spring.

For best results with biennials such as *Sweet Williams*, *Canterbury Bells*, *Wallflowers* and *Beauty of Nice Stocks*, sow them in summer. When the seedlings are large enough transplant or thin them so they will make sturdy plants by fall. At that time plant them where they are to flower. Handled in this way, these flowers will give a really good display.

Try interplanting some of these showy biennial flowers with your late-flowering Tulips for very pleasing effects.

Flower Seeds Recommended for Your Garden

AGERATUM (a) Grp. 2

Fluffy blue flowers all summer on dwarf compact plants. Easily grown in any soil. Excellent for edgings or rock gardens.

Midget Blue. Silver Medal All America Selection 1940. Fine dwarf Ageratum 2 to 3 inches high, smothered with small, true Ageratum blue flowers. **Pkt. 25c.**

Blue Ball. Compact round plants, 6 inches tall, hidden by a mass of pure blue flowers. **Pkt. 15c.**

ALYSSUM, Madwort

Blooms the entire season; popular for beds and edging in summer, or for growing in pots and boxes for winter bloom.

Carpet of Snow (a) Grp. 2. White flowers on 3-inch plants. **Pkt. 10c.**

Saxatile compactum (p) Grp. 5. Basket of Gold. Compact plants covered with a wealth of golden blossoms in early spring. 12 inches. **Pkt. 10c.**

Maritimum (Sweet Alyssum) (a) Grp. 2. Fragrant white flowers all season. **Pkt. 10c.**

Violet Queen (a) Grp. 2. Neat low plants with an abundance of sweetly scented flowers of a very rich deep shade of violet. Neat in habit and free flowering. **Pkt. 15c.**

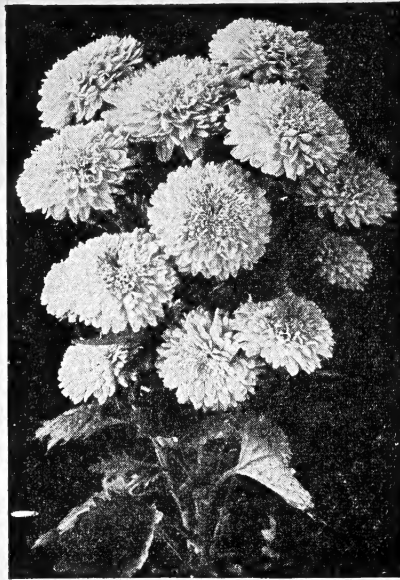
ANTIRRHINUM See Snapdragon

ARCTOTIS HYBRIDS (a) Grp. 4

Autumn Shades. A gay and cheerful member of the daisy family. Dozens of blossoms in many shades of red, orange, and yellow, from early spring onward. Attractive gray-green wavy edged leaves. **Mixed, Pkt. 25c.**



ARCTOTIS HYBRIDS



ASTER, AMERICAN BRANCHING

ASTER (a) Grp. 4

We can imagine no other flower which combines so much beauty and grace with usefulness; or one capable of more brilliant effects. From July until September the Aster reigns supreme in the garden. For these reasons we give a great deal of attention to these flowers and are in a position to offer our patrons remarkably fine strains, producing perfect flowers of great beauty. To do well Asters require a rich soil kept open by continuous cultivation.

Early American Beauty, Wilt Resistant. Robust, branching plants 2½ to 3 feet high. Large double flowers of fine form. Early Sept. Finest mixed. **Pkt. 15c.**

Heart of France. Deep ruby-red, fully double, well rounded flowers on long stems. Midseason until frost. **Pkt. 25c.**

IMPROVED CREGO WILT RESISTANT. The large shaggy flowers with long curled petals are not unlike the ostrich feather for which they are commonly named. The plants are strong, heavily branched and grow about 2½ feet in height.

Ballet Queen. Described and illustrated in color on Novelty page: front cover inside.

Blue Flame. Bright navy blue. **Pkt. 15c.**

Crimson. Glowing deep rose-crimson. **Pkt. 15c.**

Cattleya. Fascinating shade of orchid. **Pkt. 15c.**

Enchantress. Bright salmon-rose. **Pkt. 15c.**

Pink. Beautiful shell pink. **Pkt. 15c.**

Rose. Lovely bright carmine rose. **Pkt. 15c.**

White. Purest white, large and fluffy. **Pkt. 15c.**

Crego's Finest Mixed. **Pkt. 15c.**

SUPER GIANTS. Combining the Crego type of flower with the Beauty Aster's long unbranching stems, this full flowered race of Asters stands at the head of the list.

Improved Giants of California. Finest Mixed. **Pkt. 15c.**

Super Giant El Monte. Deep glowing crimson. **Pkt. 15c.**

Super Giant Los Angeles. Fully double shell pink. **Pkt. 15c.**

PRINCESS ASTERS, WILT RESISTANT. The blooms of this type have a full crested center surrounded by several rows of strong guard petals.

Wilt-Resistant Princess Anne. Peach blossom pink turning rose as the flower matures. **Pkt. 25c.**

Wilt-Resistant Princess Bonnie. Soft salmon rose. **Pkt. 25c.**

Wilt-Resistant Princess Linda. Described and illustrated in color on Novelty page: front cover inside.

Wilt-Resistant Princess Marsha. Cinna-bar scarlet. Gold centers when young. **Pkt. 25c.**

Princess Asters Mixed. **Pkt. 25c.**

Queen of the Market. Wilt-resistant. Fully double flowers 3 inches across on branching stems in early August. Attractive Mixture. 20 inches tall. **Pkt. 15c.**

BABY'S BREATH, Gypsophila

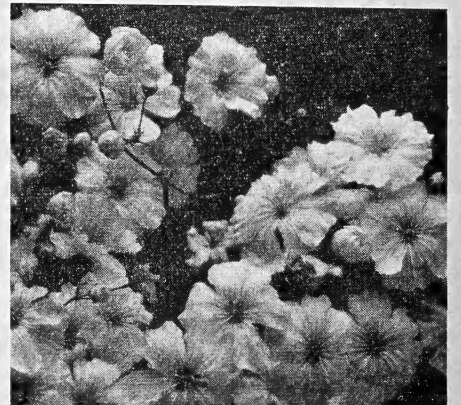
Airy sprays of white flowers, lovely for bouquets.

Brilliant Carmine (a) Grp. 3. Dainty bell-shaped blooms. Make sowings two weeks apart for continuous flowers. **Pkt. 15c.**

Covent Garden Market (a) Grp. 3. Large, single white flowers, 6-8 petals each. The type most often chosen by breeders. **Pkt. 10c.**

Paniculata Single White (p) Grp. 5. Hardy perennial with sprays of tiny rose shaped blossoms. If cut before the flowers are fully opened sprays can be used in winter bouquets. 3 ft. **Pkt. 10c.**

Paniculata Double White (p) Grp. 5. Double form of the above. Excellent for fresh or dry bouquets. **Pkt. 25c.**



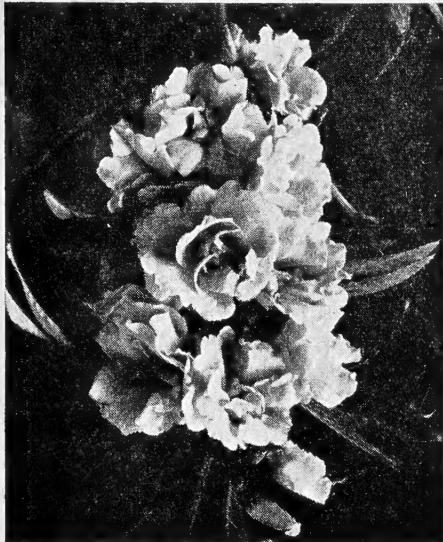
GYPSOPHILA, ELEGANS GRANDIFLORA

BACHELOR'S BUTTON or CORNFLOWER, *Centaurea*

Cornflower, Jubilee Gem (a) Grp. 3. Compact plants a foot high, literally covered with flowers. Pkt. 15c.

Cornflower, Cyanus Double (a) Grp. 3. This superb class of Cornflower has handsome large double blooms, 2 to 3 feet tall.

Blue Boy. Pkt. 10c. **Pinkie.** Pkt. 10c.
Snow Man (white). Pkt. 10c.
Mixed. Pkt. 10c.



BALSAM, CAMELLIA FLOWERED

BALSAM

Lady Slipper (a) Grp. 2

An old and popular garden flower of easy culture. Gorgeous masses of brilliant double flowers are produced in the greatest profusion. An excellent flower for your shady corner. Height, 2 feet.

Camellia Flowered. Most improved type. Finest mixed. Pkt. 10c.

BEAN (a) Grp. 2

Scarlet Runner. A rapid climber, flowering profusely; grows 10 to 15 feet high. Edible as well as ornamental. Pkt. 10c.

BELLIS

English Daisy (p) Grp. 5

This cheerful little perennial thrives in cool and shady locations. Sow in fall or spring. Mixed. Pkt. 25c.

BLACK EYED SUSAN

Thunbergia (a)

Beautiful rapid growing annual climber, preferring a warm sunny situation. Used extensively for hanging baskets, vases, low fences, etc. Very pretty flowers in buff, white, orange and other shades, with dark eyes.

Alata. Finest mixed. Pkt. 15c.

BLUE CUP FLOWER Nierembergia

Purple Robe (a) Grp. 4. Bronze Medal All America Selections, 1942. Very dwarf cushion-like plants with flowers of violet blue. In bloom for a long period. Pkt. 25c.

BUTTERFLY FLOWER *Schizanthus* (a) Grp. 2

One of our finest hardy annuals. Showy flowers of various colors, closely resembling some species of Orchids. Does well in shade.

Waller Franklin Strain. Giant Flowering Hybrids, an extra select, compact, large flowered strain, containing a perfect blend of many colors. Pkt. 25c.

CALIFORNIA POPPY See Poppy

CALENDULA

Pot Marigold (a) Grp. 2

Blooms freely in early summer and continues into fall, requiring little care to grow to perfection. 18 to 24 inches high. Plant in fall.

Campfire Improved. A very deep strong orange with distinct scarlet sheen on upper side of each petal. Blooms are flat across top, 4 inches in diameter. Pkt. 15c.

New Sunshine Calendula Chrysantha. A clear Buttercup yellow with loosely arranged petals, incurved at the center, and reflexed at the edges. The foot-long stems are strong and wiry. Pkt. 15c.

Sunset Shades. Interesting bi-color Calendula in apricot tones overlaid with orange, lemon or primrose. Lovely, compact plant for bedding purposes, producing plenty of bloom. Mixed only. Pkt. 25c.



CALENDULA

PACIFIC BEAUTIES. Large, full double blooms with long, toothed and soft petals, arranged loosely to form a ball shaped flower. Excellent home garden type, about 16" tall, with great size flowers of lemon, apricot and persimmon shades, often attractively tipped. Heat resistant. Pkt. 25c.

CALLIOPSIS (a) Grp. 3

Very showy subject for garden decoration and cutting.

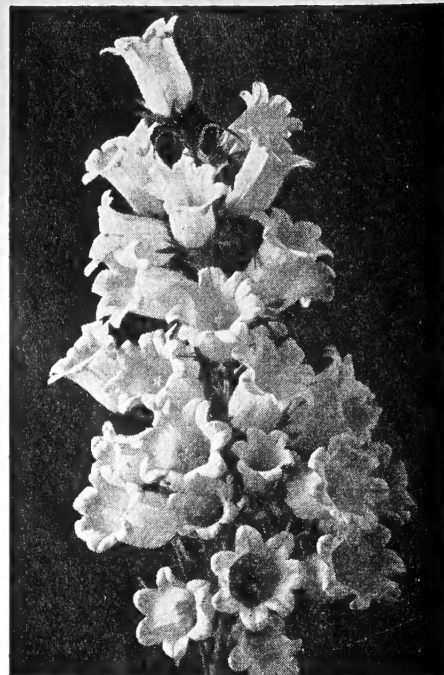
Tall Mixed. All double. Contains a wide range of color combinations, mostly bi-colored. Pkt. 15c.

CANDYTUFT (a) Grp. 1

Valuable for masses and edging. Highly desirable for bouquets.

Giant White Hyacinth Flowered. Very fine for cutting. Pkt. 15c.

Umbellata. Of compact and branching habit. Mixed colors. Pkt. 10c.



CANTERBURY BELLS

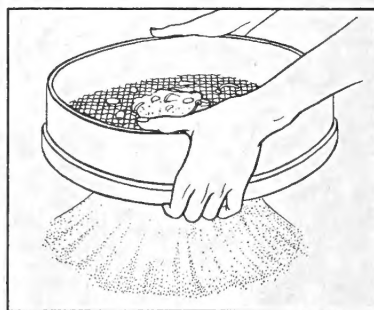
CANTERBURY BELLS

Campanula Medium (b) Grp. 5

Calycanthema, Cup and Saucers. The most beautiful type with large bell- or cup-shaped flowers surrounded at the base by a large calyx of a similar color, the whole resembling a cup and saucer. In separate colors, p.nk, light blue, dark blue, white and purple. Pkt. 15c. Finest Mixed. Pkt. 15c.

Single. A form with charming pyramids of fluted bells. 2 to 3 feet. Mixed, Pkt. 10c.

Preparing the Soil

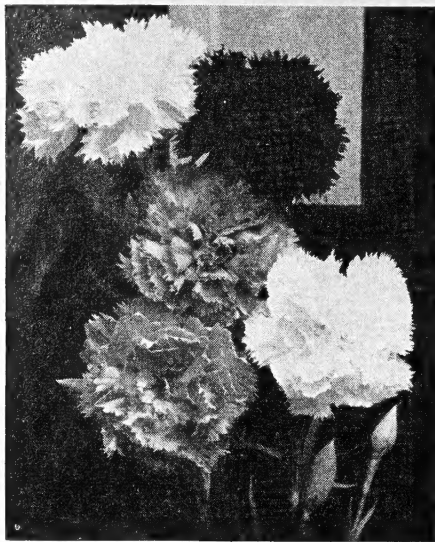


The ideal soil for seed is light and porous but will hold moisture enough to permit good germination.

A good soil mixture for seeding either indoors or outside is: $\frac{1}{2}$ light loam, $\frac{1}{4}$ sand and $\frac{1}{4}$ granulated peat moss. The addition of leaf mold improves the mixture. The top 2 inches of a seed bed should be screened through a $\frac{1}{4}$ -inch mesh screen. The ingredients should be thoroughly mixed and, just before sowing, firmed down with a flat block of wood or similar implement.

CARDINAL CLIMBER (ac)

Graceful climber with cardinal-scarlet blooms 1 to 1½ inches in diameter. Rich, glossy, dark green foliage. Grows 15 feet tall and is in bloom all summer. *Ipomoea Cardinalis*. Pkt. 25c.



CARNATIONS

CARNATION (p) Grp. 5

Few flowers surpass in beauty of form or delicious fragrance the richly-hued carnation.

Chabaud Giant. 18 inches. This variety blooms six months after seeding and continues throughout the summer. The plants, robust and erect, supply handsome, double, clove-scented flowers of extra large size. Pink, white, red and yellow. Pkt. 25c.

Mixed Colors. Pkt. 25c.

English Giants Mixed. A most complete collection of colors including many rare shades. Well grown plants, disbudded to one or two blooms per stem, will produce flowers closely approaching those grown by florists. Pkt. 50c.

CASTOR BEAN Ricinus (a) Grp. 2

Magnificent, tall, large leaved plants of tropical appearance, succeeding in a warm, sunny location. Beautiful for large foliage groups and background. Height, 10 to 12 feet.

Mixed Varieties. Pkt. 10c.

CLARKIA (a) Grp. 3

A truly charming annual of the most graceful habit, flowering in July. Rose flowers in long racemes.

Elegans. Double choice mixed. Height 2 feet. Pkt. 10c.

COCKSCOMB Celosia (a) Grp. 4

A showy annual producing massive heads of bloom in rich shades of crimson and yellow.

Cristata. Choice mixed. Height 9 to 18 inches. Pkt. 10c.

Plumosa (Improved Feather Type). Choice mixed. Height 8 feet. Pkt. 10c.

COLUMBINE

Aquilegia (p) Grp. 5

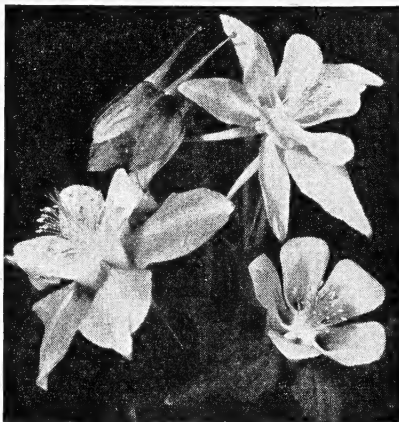
These are among the most beautiful of spring and early summer flowers; very effective when grown in the herbaceous border and groups among shrubbery. Long-spurred flowers on graceful stems 2 feet or more above the fern-like foliage.

Mrs. Scott Elliott's Strain. One of the finest tall strains ever developed, long-spurred, large flowers, in a splendid mixture of colors.

Blue. Pkt. 25c.

Mixture. Pkt. 25c.

Long Spurred Blue Shades. Larger flowered than the other colors, these are of the most beautiful shades of blue ranging from azure blue of the Cambridge Blue Delphiniums through Belladonna to the Forget-me-not, all with a rich cream center. A perennial blooming the first year from seed in most climates. Pkt. 25c.



COLUMBINE, AQUILEGIA

CORAL BELLS

Heuchera (p) Grp. 5

A low growing hardy perennial plant with heart shaped leaves, which form a low clump 6 to 8 inches high and bearing during summer, loose graceful sprays of red flowers in great profusion.

Spitfire. Large, rich scarlet. Pkt. 25c.

COREOPSIS (p) Grp. 5

One of our most popular perennials; the attractive flowers are borne in great profusion and are excellent for cutting. Height, 3 feet.

Grandiflora Double Sunburst. Much of the beauty of early summer gardens is due to the brilliant golden yellow of Coreopsis plantings. The double flowers are large, 1½ to 2 inches across, deep golden yellow, and are excellent for cutting as well as for garden decoration. Fine keepers; plants are easy to grow. Pkt. 15c.

COSMOS (a) Grp. 3

No garden is complete without Cosmos. These old favorites supply a gorgeous, colorful effect during late summer and fall. Fine for cutting as the flowers last well in water.

Early Klondyke Orange Flare. The long-stemmed flowers of bright vivid orange are freely borne on 2 to 3 foot plants. Its most remarkable feature, however, is its early blooming habit. It blooms from mid-summer until frost. Pkt. 15c.



COSMOS, DAZZLER

SENSATION COSMOS

A superior type for cutting and all around use. Flowers 4 to 5 inches across on 3- to 4-foot plants.

Dazzler. A luscious shade of velvety crimson maroon. Pkt. 15c.

Pinky. A delightful rose-pink. Pkt. 15c.

Purity. Glistening white. Pkt. 15c.

Radiance. Winner of the highest award in the 48 All America trials, Radiance introduces two entirely new colors in Sensation Cosmos: Striking deep rose and rich crimson, in the first bicolor Cosmos ever to be developed. Pkt. 25c.

CYNOGLOSSUM (b) Grp. 2

Blue Chinese Forget-Me-Not

Firmament. A hardy biennial of the easiest culture, forming strong plants about 18 inches high and producing through the summer months sprays of Forget-Me-Not-like flowers. Will bloom the first season if sown early. Pkt. 10c.

DAHLIAS

From Seed (rp) Grp. 5

Improved Unwin's Dwarf Hybrids. These double and semi-double Dahlias are one of England's best contributions to the flower world. They grow from 18 inches to 2 feet tall and come in many delightful shades. Plants are compact and are as easy to grow as Zinnias. Bloom the whole summer. Mixed colors. Pkt. 15c.

Coltness Hybrids. Dwarf Dahlias which grow but 12 to 18 inches tall. Masses of single flowers in many brilliant colors make beautiful borders; also very useful for cutting as the flowers are borne on stiff stems. Flowers from early July to frost and require little care. Mixed colors. Pkt. 15c.

DAISIES

AFRICAN GOLDEN DAISIES, Dimorphotheca (a)

The plants are of branching habit, growing about 15 inches high. An easily cultivated annual. Mixed. Pkt. 15c.

PAINTED DAISY, Pyrethrum (p) Grp. 5

This plant is cousin to the Chrysanthemum and Matricaria and should play an important part in many a well planted garden. Height, 1 to 3 feet.

Single Mixed. Radiating petals in many tones of rose and red about a golden center. Pkt. 15c.

(Annual Chrysanthemum) (a) Grp. 1

Merry Mixture. Described and illustrated in color on inside front cover of this catalog.

SHASTA DAISY,

Chrysanthemum maximum (p) Grp. 5

Popular hardy perennial bearing large white blooms with handsome yellow centers. They are excellent for border plantings and especially pleasing in bouquets. Pkt. 15c.

SWAN RIVER DAISY

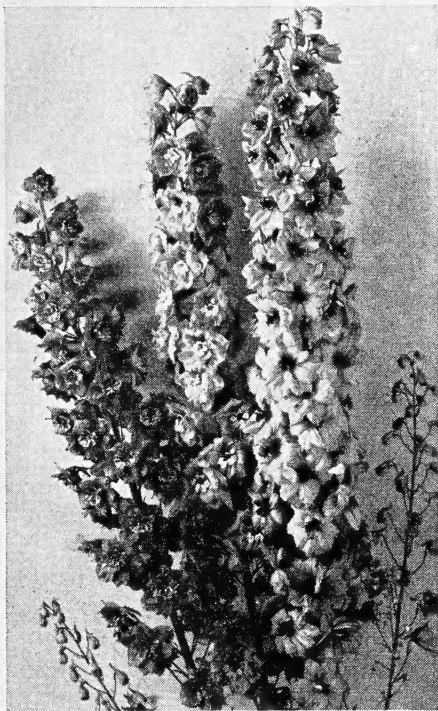
Brachycome (a) Grp. 2

Brilliant free-flowering annual blooming throughout the summer and suitable for beds or borders. The dainty flowers resemble small *Cinerarias*. Height, 6 to 12 inches.

Mixed Colors. Pkt. 15c.

TRANSVAAL DAISY, *Gerbera* (p) Grp. 5

The large Marguerite-like flowers come in all shades of pink, salmon, red and yellow and are borne on long, stiff, straight stems. They require a warm, sunny position, good drainage and protection from frost. Single. Pkt. 25c.



DELPHINIUM, PACIFIC HYBRIDS

DELPHINIUM (p) Grp. 5

Pacific Hybrids. A new strain of Delphiniums originated on the Pacific Coast to grow under Pacific Coast conditions. Huge flowers, $2\frac{1}{2}$ to $3\frac{1}{2}$ inches across, beautifully spaced on well balanced tall spikes. Highly resistant to mildew. Color range excellent and comes practically 100% double florets.

Blue Bird. Brilliant blue. Pkt. 50c.

Galahad. White. Pkt. 50c.

Guinevere. Pink-lavender. Pkt. 50c.

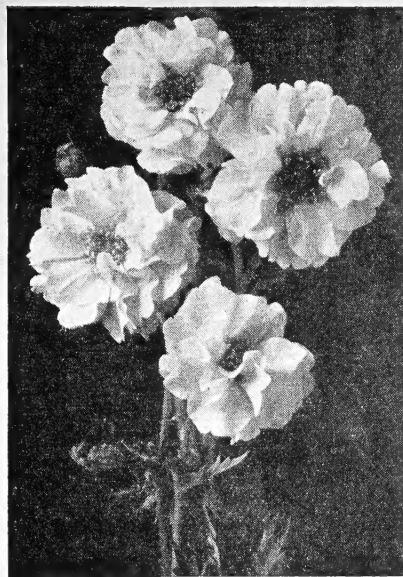
Summer Skies. Light blue. Pkt. 50c.

Mixed, Pkt. 25c.

Chinensis, Cambridge Blue (a) Grp. 2. Branching heads of azure blue flowers, plants three feet high. Pkt. 15c.

DIANTHUS

See Pinks



GEUM

FLOWERING TOBACCO

Nicotiana (a) Grp. 4

Stately plants producing large, trumpet shaped blooms until frost. Fine for beds and borders. Height, 3 feet.

Affinis Hybrids, Mixed Colors. Pkt. 10c.

Fragrant Red. Pkt. 10c.

Fragrant White. Pkt. 10c.

FOUR O'CLOCK

Mirabilis (a) Grp 1

Petticoat. A brand new form of the ever popular and colorful Four o'Clock or Marvel-of-Peru. The sepals of each flower are brightly colored to match the petals, giving a charming flower-within-the-flower effect. Mixed colors. Pkt. 15c.

FOXGLOVE, *Digitalis* (b) Grp. 5

This ornamental hardy plant is used extensively for naturalizing in shrubbery borders and along the edges of woods. It grows well under almost any conditions, giving a wealth of bloom during June and July. Height, 4 to 6 feet. Shirley Mixed. Pkt. 10c.

FUCHSIA SEED

Offered for the first time. See Novelty page 3.

GAILLARDIA

Blanket Flower (p) Grp. 5

Tones of orange, yellow, red, and maroon, often beautifully combined in a single blossom, make these flowering plants gay ornaments of the garden all summer. Height, 1 to 2 feet.

Grandiflora Portola Hybrids. (p) Semi-double blooms of magnificent size and broad overlapping petals, golden tipped around glowing centers of bronzy red. Pkt. 10c.

Sunshine Hybrids. Pkt. 25c.

GERANIUM SEED (p) Grp. 5

A mixture of many lovely shades and types. Suitable for pot plants. Also excellent for the garden. Where frosts are encountered set plants, pot and all, in the garden for summer bloom. Pkt. 25c.

GEUM, *Avens* (p) Grp. 5

Beautiful hardy perennials, bearing profusely large, showy, double flowers all through the summer. An elegant flower for bouquets. Height, 18 inches.

Lady Stratheden. A new golden yellow with large full flowers of great beauty. Pkt. 15c.

Mrs. Bradshaw. Large, double, brilliant orange-scarlet. In flower throughout the entire summer. Pkt. 15c.

GODETIA, *Satinflower* (a) Grp. 2

Very handsome annual plants, especially suited for semi-shady locations. Sow in spring in the open and thin to 8 or 10 inches apart. The flowers are bright and colorful and the single sorts are not unlike the Azalea in form.

Tall Double. Long graceful spikes are decorated with double blossoms resembling satin pompons one above another. Height, 2 feet. Pkt. 10c.



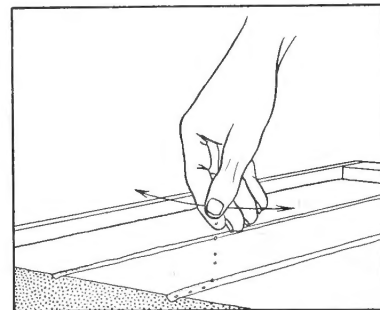
ORNAMENTAL GOURDS

ORNAMENTAL GOURDS

(ac) Grp. 3

Ornamental Gourds are easily grown in rich soil, where they will produce plenty of fruits. They may be trained on trellises and the ripened fruits used for ornaments. Special mixture of large and small kinds. Pkt. 10c.

Sowing the Seed



Mark the surface of the flat or seed bed by pressing a narrow edged ruler or garden label lightly into the surface. Sow the seed thinly in the depressions, either directly from the seed packets, or by sifting it out between your thumb and forefinger. The seed should be covered lightly. A fine meshed kitchen screen serves very well for this purpose. Place a handful of dry soil mixture in the screen and sieve onto the seed drill.

GET RESULTS *against* PESTS!

CHECK YOUR NEEDS WITH
THIS HANDY LIST OF
ORTHO PEST CONTROL PRODUCTS!



ORTHO
SCIENTIFIC PEST CONTROL



If you prefer to spray, use **ORTHO Garden Spray Set**. It contains 4-oz. bottles of **EXTRAX**, **GREENOL** and **VOLCK**... makes a multi-purpose spray for simplified control of many damaging garden and flower pests. 4-oz. set, \$1.85; Jr. 2-oz. set, \$1.20.



BOTANO de luxe is ready to use! No measuring, no mixing, no fuss. Simply point the dust-gun package and pump. Gives highly effective control of major insect pests and plant diseases. 8-oz. dust gun pkg. 79c; 2-lb. refill pkg. \$1.75; 5-lb. refill pkg. \$3.95.



These highly-compressed pellets are cleaner and handier to use. Also **BUG-GETA PELLETS** go about 4 times farther than old-style meal baits. A pound of meal baits about 300 sq. ft. . . . while **BUG-GETA PELLETS** bait about 1,200 sq. ft. per pound. That's economy! About 5000 baits in 2-lb. Carton, 75c; 12-oz. Carton, 35c; 5-lb. Carton, \$1.50; 25-lb. Carton, \$6.25.



KILLS APHIS, THRIPS,
RED SPIDER MITES,
SCALE CRAWLERS...

ORTHO VAPOTONE-XX SPRAY

4-oz. bottle, 85c; Pint Bottle, \$2.50;
95/100 gal., \$11.90



ORTHO® ANT & MOTH SPRAY

2½% CHLORDANE

Pint bottle, 45c; Quart bottle, 75c

CONTROL MILDEW,
PEACH LEAF CURL, SCAB,
RED SPIDER MITES,
SAN JOSE SCALE...

ORTHO RIX SPRAY

Pint, 75c; Quart, \$1.25; Gallon,
\$4.00; 5 Gallons, \$15.00



Ask your dealer about these other **ORTHO** products:

ORTHOCIDE Soil Fumigant —
16-oz. \$1.50; ½-gal. \$4.50

TRIOX (an Arsenical Weed Killer)
Qt. \$1.00; Gal. \$3.50; 5 gals. \$12

ORTHO ROSE DUST — 8-oz. \$1.00;
1-lb. refill \$1.25; 5-lb. refill \$5.50
(in Wash., Ore. only).

ANT-B-GON — Set of four 1-oz.
dispensers 70c.

GREENOL Liquid Fungicide —
1-oz. 35c; 4-oz. 60c; Pt. \$1.50;
½-gal. \$5.00

WEED-B-GON — 4-oz. 50c; Pt.
\$1.50; ½-gal. \$4.00 (Fertl-Rain
Applicator, \$1.95)

VOLCK Oil Spray — 4-oz. 35c;
Pt. 70c; Gal. \$2.85; 31-oz. \$1.25

ORTHOL Garden Spray — 4-oz.
35c; Pt. 75c

EXTRAX — 2-oz. 59c; 4-oz. \$1.00;
Pt. \$2.95; ½-gal. \$10.25

PEST-B-GON Insect Spray —
4-oz. 50c; Pt. \$1.75

ORTHO Rose Spray Kit —
2-oz. Kit \$1.00

SCRAM Dog Repellent — 8-oz. 50c

ORTHO PET Flea Powder —
1 ½-oz. Puffer Package 35c

APPO Cutworm Bait —
1-lb. Carton 45c

BEST

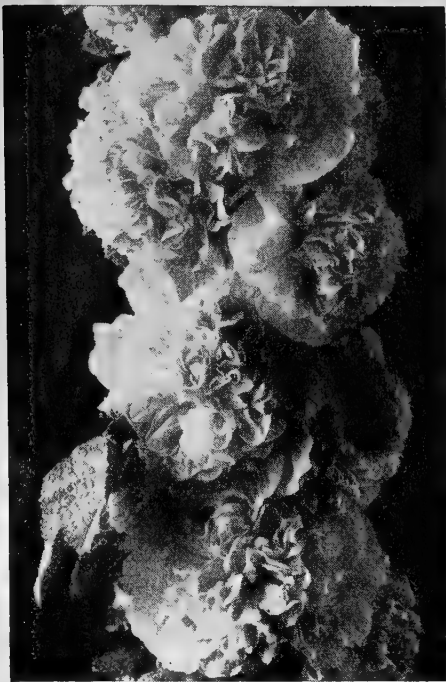
AGAINST

PESTS

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SCIENTIFIC PEST CONTROL
REG. U.S. PAT. OFF.

CALIFORNIA SPRAY-CHEMICAL CORP.

Richmond, Calif. • Whittier, Calif.
Portland, Oregon • Boise, Idaho



DOUBLE HOLLYHOCK

HOLLYHOCK, *Althaea* (p) Grp. 5

The beautiful color effects produced by the planting of these flowers render them indispensable for the old-fashioned garden or the herbaceous border. Height, 6 to 12 feet.

Indian Spring. (a) Semi-double annual flowers of bright rose and rosy carmine. Its many flowered branches produce a continuous show until frost. Sow fall or early spring. Flowers five months from seed. Pkt. 15c.

Triumph. Double Mixed. Tall, very vigorous plants with many large flowers well placed on long tall spikes. The very large flowers are loosely doubled, well ruffled and fringed petals making them particularly attractive. The colors range through all the beautiful shades with pinks and salmon predominating. Many are two-toned art shades. Pkt. 10c.

Chater's Double. (p) Deep rose, salmon rose, scarlet, sunflower yellow, and white. Separate colors. Pkt. 10c.



LOBELIA, CRYSTAL PALACE

LARKSPUR (a) Grp. 3

Annual Delphinium are adorned with finely cut, feathery foliage which sets off to advantage the handsome long floral spikes of double blossoms.

GIANT IMPERIAL. Tall, upright, compact, basal branching in habit, the Giant Imperials have replaced all other types of Larkspurs for general garden use. Their Delphinium-like spikes of double florets are carried on stout stems 4 to 5 feet.

Blue Bell. Delightful clear light blue Upright with long base branching spikes. Pkt. 15c.

Carmine King Improved. Rich deep carmine and salmon flowers on long spikes; 3 to 4 ft. stems. Pkt. 15c.

Blue Spire. Very deep violet blue. Outstanding color. Pkt. 15c.

Pink King. A lovely soft, yet vibrant shade of salmon rose. Fully double, two-inch florets of rounded broad petals which are evenly and closely spaced on stems. Basal branched character gives several fine spikes of bloom on each plant. One of the earliest flowering of all Larkspurs. Pkt. 15c.

Rose King. A luscious, rich rose of lovely effect. The 2-inch florets of broad, rounded petals are closely arranged on the stem. Pkt. 15c.

White King. Flowers pure, glistening white, with extremely large double florets, evenly spaced on stem. Early, the finest Larkspur. Pkt. 10c.
Finest Mixed. Pkt. 15c.

LINARIA

Miniature Snapdragon (a) Grp. 3

This interesting annual bears flowers which resemble miniature Snapdragons ending in single elongated spurs. Height 8 to 18 inches.

Fairy Bouquet. Small spikes of dainty, pastel flowers. Fragrant. Free-flowering and lovely in the border. Pkt. 10c.

LOBELIA (a) Grp. 4

A dainty and continuous blooming annual of compact growth, remarkable for its profusion of beautiful blue flowers. Unexcelled for edging, ribbon beds, hanging baskets or window boxes. Height, about 6 inches.

Compacta, Cambridge Blue. A beautiful large flowered, light blue variety. Green foliage. Pkt. 10c.

Compacta, Crystal Palace. Erect and very free blooming. Best dark blue for edging. Fine for pots. Pkt. 15c.

Sapphire. A superb variety of pendulous habit; large deep blue flowers with conspicuous white eye. For hanging baskets and window boxes. Pkt. 10c.

LUPIN, Sun Dials (p) Grp. 1

Russell Lupins. Long, closely set spikes of flowers in a great variety of rich colors—deep yellows, oranges, reds, and brilliant bi-colors never seen in Lupins before. The florets are large with flat fan-like back-standards, and unlike all other Lupins, most of the spikes retain their florets throughout the whole period of development. Pkt. 25c.



MARIGOLD (a) Grp. 2

AFRICAN TALL DOUBLE (*Tagetes erecta*). Very large globular flowers composed of compact tubular or quilled petals. The stems should be cut carefully to avoid the somewhat disagreeable odor when bruised. Height, 2½ feet.

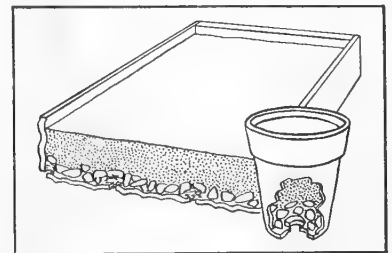
All Double Orange. An improved strain which produces practically one hundred per cent double flowers. Pkt. 15c.

Lemon All Double. A fluffy fully doubled variety with pale yellow blooms loosely quilled. Pkt. 15c.

CARNATION FLOWERED, Guinea Gold (African). Carnation-like petals and unusually brilliant golden color makes this flower outstanding among Marigolds. It lacks much of the pungent odor of other Marigolds. The plant blooms very freely. Height, 2 feet. Pkt. 15c.

Gigantea, Full Double Mixture. Flowers are largest ever known in Marigold. A mixture ranging from deep orange through golden orange, deep golden yellow, light yellow, lemon yellow, and a delightful new shade of primrose. Pkt. 15c.

Drainage is Important



For growing seed indoors either pots or shallow boxes known as flats, are satisfactory. Whichever you use be sure the drainage is good. In the case of flats see that the boards on the bottom are spaced about a quarter of an inch apart. When filling the seed flats place some material such as granulated peat moss along the cracks to prevent the soil from washing through the bottom. On the bottom half inch of the flat place gravel or soil screenings to help the drainage. If pots are used be sure to put some drainage material in the bottoms.

DWARF FRENCH, Double Harmony Hybrid. Without question one of the very finest Marigolds introduced. Flowers charming and distinct. Scabiosa-like in formation with tubular deep orange center petals flanked by broad velvety dark maroon-brown guard petals. Plants are dwarf, about 1 ft. high, compact, free blooming. Early and attractive for cutting. **Pkt. 15c.**

Scarlet Glow. Single. 10 inches tall, well covered with flowers 1½ inches across, which vary interestingly from deep scarlet to tangerine yellow. **Pkt. 15c.**

MISSION GIANTS, Mixed. Honorable Mention, All-America Selections, 1942. Large, two and a half inch flowers of bright, rich, clear yellow, on luxurious, large plants. Flowers are of double, incurved, Chrysanthemum-like form, and very attractive. Blooms late and lasts until frost. Uniformly three to five feet tall. **Mixed. Pkt. 15c.**

Red Head. Described and illustrated in color on Novelty page: front cover inside. **Pkt. 25c.**

MINIATURE, Yellow Pygmy. Honorable Mention, All-America Selections, 1940. Light lemon yellow. Lilliput French double type, growing only 8 inches tall and compact. Flowers 1¼ inches across, freely produced. Excellent for edging and potting. **Pkt. 15c.**

Miniature Spry. Extra dwarf, double French type; compact and uniform, so may be used for edging. About 9 inches tall, early blooming, with very light orange crested center and maroon outer petals. Profuse flowering. **Pkt. 15c.**

MIGNONETTE

Reseda Odorata (a) Grp. 4

This old-fashioned flower still enjoys the greatest popularity. Grown for its sweet perfume, which is most pronounced when grown in a light sandy soil. Height, 6 to 10 inches.

Machet Mixed. Includes only large flowering varieties of sweet scented Mignonette. **Pkt. 10c.**

FOR YOUR ROCK GARDEN



ROCK GARDEN ANNUALS Mixed

This mixture of over 30 varieties, not exceeding 12 inches in height, will provide blooms through the entire season. Planted as early as possible, the gardener should have blooms by the end of May. A succession of blooms will follow until late fall when frost will destroy the flowers. A second lot of blooms may be enjoyed on most plants if they are cut back to two inches of the crown and properly watered. **Pkt. 25c**

MORNING GLORY Ipomoea (ac) Grp. 1

Climbers of rapid growth, with beautiful and varied flowers, invaluable for covering walls, trellises, arbors.

Blue Star. A new introduction, described and illustrated on page 3.

Heavenly Blue. A variety that is bringing new popularity to Morning Glories. It is an early blooming climber, literally covered with lovely flowers of sky-blue. Flowers 3½ inches across and blooms until frost. **Pkt. 15c.**

Pearly Gates. Glistening white flowers are 4 inches or more across when fully open. The vigorous, rapid growing vines produce many flowers. **Pkt. 25c.**

Scarlett O'Hara. An entirely new color in the popular Morning Glories — rich dark wine red or deep rosy crimson. Flowers 4 inches in diameter, freely produced on fast growing vines. Very showy for covering a fence or trellis. The dark green foliage does not make a heavy growth, leaving plants graceful in appearance. **Pkt. 15c.**

Mixed Imperial. These are beyond question the handsomest of all Morning Glories. The flowers are of gigantic size. **Pkt. 10c.**



PANSY

ROCK GARDEN PERENNIALS Mixed

A mixture of over 50 rare rock garden perennials with a maximum height of six inches. Some of the items will bloom almost as soon as the frost is out of the ground. Others will bloom later in the year, insuring the grower blooms all season. A planting, carefully made in a suitable place, should remain a beauty spot for a number of years without re-seeding if given minimum care. **Pkt. 50c.**

DIANTHUS, Perennial Rock Garden Mixture

Twenty varieties of unusual species of dwarf perennials. When well grown, many plants will produce such an abundance of blooms that daily cutting of flowers will not decrease the loveliness of the plant. With an occasional replanting should last several years. **Pkt. 50c.**



NASTURTIUM (a) Grp. 1

GLORIOUS GLEAM HYBRIDS. Delightfully sweet scented; double. Color range includes brilliant blend of salmon, golden yellow, orange scarlet, cerise, cream, orange, maroon and crimson shades. **Pkt. 15c.**

Golden Gleam. Golden yellow, sweet scented. **Pkt. 15c.**

Scarlet Gleam. Fiery scarlet. **Pkt. 15c.**

DWARF DOUBLE GEM MIXTURE. An evenly balanced range of colors on dwarf, compact gem-like plants. Ideal annual for border and edging use. Plants are dwarf and compact, totally without runners. **Pkt. 25c.**

DWARF OR BEDDING VARIETIES. Of dwarf, compact growth. Excellent for borders or for bedding, forming plants about 1 foot high by 1 foot across. **Finest Mixed. Pkt. 15c.**

TALL or CLIMBING NASTURTIUMS. For covering trellises, fences, arbors, trailing from vases, over rock-work, etc. nothing can equal their great quantities of bloom from early summer until frost. The seed pods can be gathered while green and tender for picking. Height, 8 to 10 feet. **Finest Mixed. Pkt. 15c.**

NEMOPHILA (a) Grp. 1

Small cup-shaped blossoms which are fine ground cover for bulb beds. Grows about 6 inches high.

Baby Blue Eyes (Insignis Blue). Sky blue with white eyes. **Pkt. 10c.**

NEMESIA (ra) Grp. 4

This plant is excellent for edging purposes. Plants send up many slender stalks crowned with fairy-like flowers, something like a Schizanthus. When the flowers fade they may be trimmed back and will bloom again. Their colors run from the brightest reds, yellows, oranges, to the brightest blues and purples.

Compacta Triumph, Finest Mixed Colors. **Pkt. 25c.** Height 6 to 12 inches.

PANSY, Heart's Ease (b) Grp. 5

Swiss Giant. Within the last few years the blossoms of this strain have been remarkably improved in every way. The plants are compact in habit and produce immense flowers for a long blooming season. Attractive shades. **Pkt. 50c.**

Popular Bedding Mixture. These are the popular saucy-faced beauties that everybody loves, comprising the finest varieties in all colors. **Pkt. 20c.**



PETUNIA, GIANT OF CALIFORNIA

PETUNIA (a) Grp. 4

The seed may be started indoors early in the year in seed boxes and later transplanted or sown out of doors in the spring. Cover very lightly and apply water with a fine spray. Be careful not to discard the smaller and weaker seedlings. From these the finest flowers are often obtained, the coarse growing plants frequently reverting to the common types.

Ruffled Nana Compacta—Little Giants See Novelty page 3. Mixed only. Pkt. 25c.

HYBRIDA NANA COMPACTA. 1 ft. A fine type of Petunia for small beds and borders; often used for pot culture. This Petunia keeps its dwarf stature very well throughout the blooming season.

Glowing Rose. A new Petunia described and illustrated in color on Novelty page: front cover inside. Starts to flower a month ahead of nana compacta varieties and remains in bloom as long as the later kinds. Pkt. 25c.

Rosy Morn. Soft, rosy pink with white throat. Pkt. 10c.

Heavenly Blue (Silver Blue). Enchanting shade of light silvery blue. Dwarf. Pkt. 10c.

Snowball. Flowers pure white. Pkt. 35c.

Velvet Ball. Deep mahogany red flowers, larger than others in this group. Pkt. 25c. Mixed. Pkt. 10c.

PETUNIA GRANDIFLORA (Large Flowered)

Dazzler. A new low-growing variety that maintains its uniform habit throughout the season. The color is a dazzling orange scarlet. Invaluable for borders and bedding. Pkt. 25c.

Elk's Pride. Very large, deep purple. Pkt. 25c.

Snowstorm Improved. Glistening white shading yellow in throat. Pkt. 25c.

Petunia LARGE FLOWERED FRINGED

Theodosia. Soft rosy pink with contrasting golden yellow veined throat. An outstanding variety in this class. Pkt. 25c.

PETUNIA FRINGED AND RUFFLED Super Fluffy Ruffles. A new ruffled and frilled type of Petunia that has the appearance of being almost double. Flowers are very large with a deep throat. The mixture is well balanced with shades of pink and white, salmon, salmon pink, deep rose, rose, crimson, and light blue. Pkt. 25c.

RUFFLED GIANTS OF CALIFORNIA Glamour. Honorable Mention, All-America Selections, 1942. Large flowers of salmon-rose with brown veining on white in the throat. An excellent color under artificial light and outdoors. Most flowers have wavy, fringed petals although a few come plain edged. Pkt. 50c.

Supreme Strain. A new strain of rose and pink shades. Light, richly-veined throats surrounded by satiny petals which are heavily ruffled. Large blooms. 5 to 7 inches in diameter, produced on strong, richly-foliaged plants. Excellent bedding variety; fine window box type. Pkt. 25c.

DWARF GIANTS OF CALIFORNIA

A dwarf sturdy growing type especially suited to pot culture. Flowers are beautifully ruffled and fringed with open well-marked throats.

Ramona Strain. Dark and light shades mixed. Pkt. 25c.

PHLOX DRUMMONDI (a) Grp. 2

Well branched plants with large clusters of many beautiful round-petaled flowers which grow about 1 inch across. Varied colors and color combinations. Mixed only. Pkt. 15c.

Gigantea Brilliant. The individual flowers of this type are large and borne most freely in massive trusses on strong, upright plants. Excellent for borders and beds as well as for cutting. Mixed colors only. Pkt. 25c.



PHLOX, GIGANTEA BRILLIANT

PIN CUSHION FLOWER (See Scabiosa)

PINKS (a) Grp. 2 (DIANTHUS)

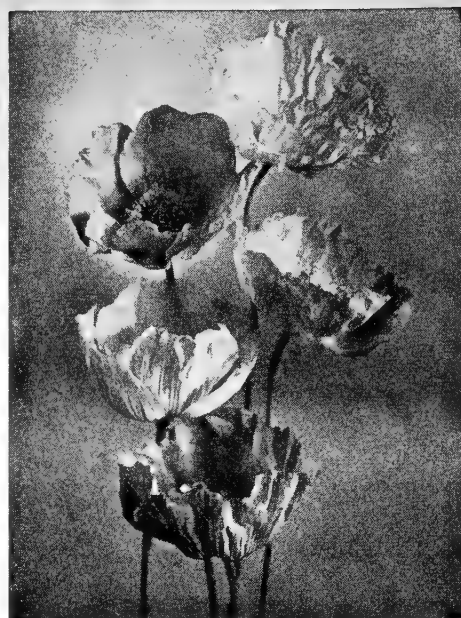
Plant in full sun in any good garden soil. Sow in spring when danger of frost is past.

Heddewigi (Double). 10 inches. Very desirable pink in many color combinations for rock garden or borders. Pkt. 10c.

Heddewigi Gaiety. The best annual garden pink. The large fringed flowers have a bewildering variety of pink, white, red and maroon coloring, in decorative patterns, on dwarf plants. There are numerous double and semi-double forms. Pkt. 25c.

Dianthus Plumarius (Clove Pinks). Perennial. Double. Pkt. 10c.

Dianthus—Sweet Wivelsfield. Quite distinct from the annual Sweet William. It has a great variety of color and long blooming season. Magnificent bedding subject. Single Mixed. Pkt. 10c.



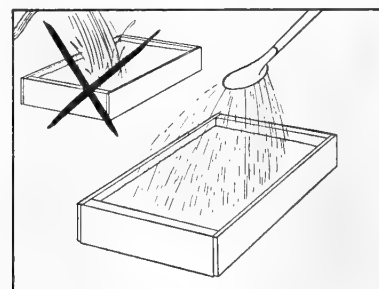
ICELAND POPPIES
(See page 13.)

POPPIES, Papaver

Poppies have long been favorite garden flowers for their delicacy, as well as the simplicity of the buds and neatness of the foliage. The pure colors and fine texture of the petals make a good showing in the garden. All are easily raised from seed which should be sown where the plants are to remain, later thinning to 8 or 12 inches between plants. In the North, sow in the open ground as early as possible in the spring; in California, sow from October to March.

Oriental Poppies (p) Grp. 5. Hardy plants with numerous leafy stems about 2½ feet bearing large showy flowers with a conspicuous black blotch on each petal. Mixed. Pkt. 25c.

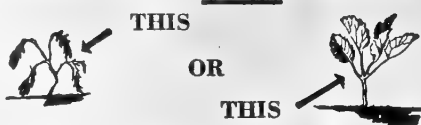
Water—But Gently



Water the seed bed thoroughly, but gently with a fine spray. A coarse spray or stream of water will wash the seed out of the soil. For this reason, when using an outdoor seed bed, it is well to have a cover available to place over the seed bed during rainy spells. This should be supported several inches over the seed bed to allow free circulation of air.

Be sure to keep the seed bed moist. Excessive dryness will prevent germination.

WHICH DO YOU WANT ?



The hormones and vitamins (B, and others) found together only in



THE HORMONE-VITAMIN POWDER

Stop the shock and wilt usually inevitable after transplanting all kinds of plants. . . . Simple, Safe, Economical to use. 1/2 oz. packet 25c, 3 oz. can \$1.00, 1 lb. can \$4.00.



MORE TOMATOES and more SEEDLESS tomatoes WITH

FRUITONE

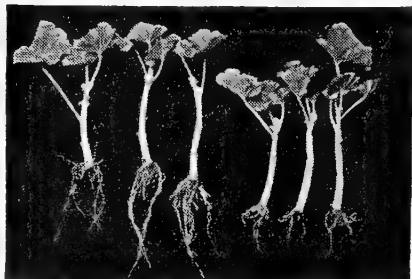
REG. U. S. PAT. OFF.

This plant hormone spray will help develop a better set and a bigger crop of tomatoes. If the

spray hits the blossoms *after* blooming and *before* pollination, the tomatoes will be seedless. Simple and easy to use, Fruitone also helps grow big berries on berry-bearing shrubs and stops pre-harvest drop on fruit trees.

ROOTONE

Reg. U. S. Pat. Off.



Geranium Cuttings. Treated and Untreated

ROOTONE, the plant hormone powder. Dip cuttings in Rootone before planting to give faster, better, more successful rooting. Mix flower, vegetable or grass seed with Rootone before planting to give faster growth and stronger roots. Easy to use. 1/4 oz. packet 25c. 2 oz. jar \$1.00. 1 lb. can \$5.00.

Secret of bigger, better potted plants, garden flowers, vegetables!

Feed PLANTABBS to everything growing in your house and garden. If you don't get lovelier plants and a greater yield of finer-flavored vegetables, you get your money back.

PLANTABBS are convenient, clean, odorless, highly concentrated PLANT FOOD TABLETS which help produce sturdy stems, luxuriant leaves, strong roots, gorgeous blooms, perfect form and color.

Box of 10 tablets 10c; 30 tablets 25c; 75 tablets 50c; 200 tablets \$1; 1000 tablets \$3.50.

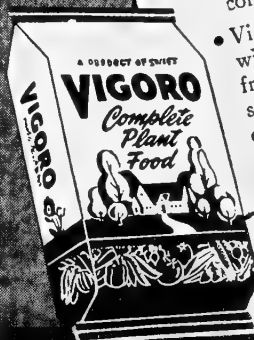


Have a Beautiful Lawn!



- Don't be satisfied with a sparse, spotty lawn. You can very easily have one that's "the finest in the neighborhood."
- Feed your lawn with VIGORO, complete plant food!
- Vigoro supplies all growing things with the nourishment needed from the soil. It is clean, odorless, sanitary, and easy to use. Most economical, too!

A PRODUCT OF SWIFT



PRICES

1-lb. bag .15; 10-lb. bag .90
5-lb. bag .50; 25-lb. bag \$1.75
100-lb. bag \$5.00

Good News for Gardeners

FROM THE MAKERS OF VIGORO

End o Pest

EndoPest gives you three-way control over most garden pests . . . with one easy-to-use product. Just a few strokes with the exclusive, cartridge refillable dust gun and you have all the protection most gardens need.



End o Weed

Spray ugly weeds away with EndoWeed! EndoWeed destroys weed leaves, stems and roots in a week or so, yet will not harm ordinary grass nor affect the soil. Kills dandelions, chickweed, plantain and 100 other lawn weeds.

**We Carry a Complete Line of
GARDEN TOOLS AND SUPPLIES
Insecticides, Sprayers, Fertilizers
GARDEN HOSE, PET SUPPLIES**

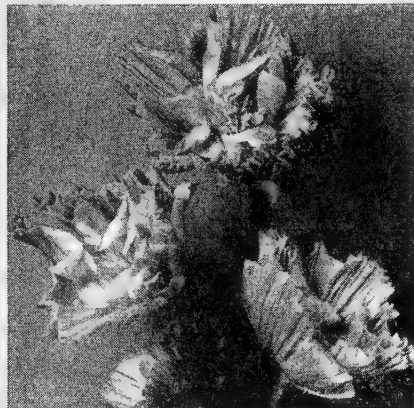
ICELAND POPPY (p) Grp. 5. (Nudicaule). A hardy Poppy slightly resembling Shirley. Different in habit and contains many shades of yellow and orange. Height, 18 inches.

Kelmscott Strain. A superb mixture. All colors. Pkt. 25c.

SHIRLEY (a) Grp. 1. Most charming Poppy for the garden. The plants, with their deeply cut foliage, slender, hairy stems and silky petaled blossoms, often fluted, present a gay, airy picture. Height, 18 inches. Pkt. 10c.

Shirley Double Mixed. Mixture of the best colors. Full double and semi-double flowers in a great variety of colors. Pkt. 10c.

Sweet Brier (Double Annual Shirley). Full, double begonia-like flowers of a beautiful deep rose pink. One of the finest strains of double Shirleys for the garden. Pkt. 10c.



ESCHSCHOLTZIA, RAMONA HYBRIDS

CALIFORNIA POPPY *Eschscholtzia* (a) Grp. 1

Grandiflora Hybrids. Large flowering varieties in the most exquisite shades of gold, copper, bronze, scarlet, purple and crimson. Mixed Colors. Pkt. 10c.

Ramona Hybrids. A new strain containing many lovely shades. The plants grow compact and upright, with flowers beautifully frilled. Mixed Colors. Pkt. 10c.

Aurantiaca, Orange. The famous California Poppy. Pkt. 10c.

PORTULACA Moss Rose (ra) Grp. 1

Brilliant hardy annual of easy culture; excellent for massing in beds, edging or rock work, thriving best in a light, sandy soil and a sunny situation. Flowers of the brightest colors. Height, 6 to 10 inches.

Jewel Single. No one who has in mind the usual Portulaca flower can imagine the beauty of this variety, which is four times as large, and a brilliant deep crimson coloring. Pkt. 25c.

Double Mixed. Pkt. 15c.

Single Mixed. Pkt. 10c.

RED HOT POKER *Tritoma* (p) Grp. 5

A perennial, not strictly hardy, but will live through the severe winters with a protective covering of leaves or manure; or the roots may be lifted and carried over winter in sand in a cellar. Height, 4 to 6 feet. It harbors gladiolus thrips.

Mixed Hybrids. Pkt. 10c.

SALPIGLOSSIS Painted Tongue (a) Grp. 2

For delicate grace, richness of coloring, and velvety texture, the regal salpiglossis has practically no equal. From a low base of leaves rise slender wiry stalks which bear one or more large Lily-like flowers in a magnificent range of colors. Height, 1 to 2½ feet.

Superb Mixed. Pkt. 10c.

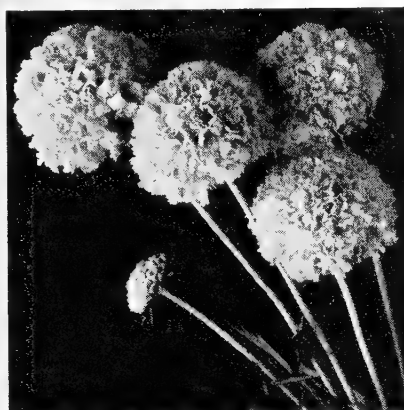
POT MARIGOLD See *Calendula*

SALVIA, FLOWERING SAGE

Scarlet sage is usually treated as an annual. Start the seed from January to May, and set out plants when weather becomes warm. Perennial in mild climates.

Bonfire Grp 4. The crimson spikes grow erect above the foliage, forming handsome globular bushes. Pkt. 20c.

Zurich Grp. 4. Dwarf and compact in growth, forming oval bushes 15 to 18 inches high, thickly studded with fine spikes of scarlet flowers. Pkt. 25c.



SCABIOSA, HEAVENLY BLUE

SCHIZANTHUS See *Butterfly Flower*

SCABIOSA

Pin Cushion Flower (a) Grp. 2

(Not too good in very hot climates)

Rosette. A beautiful Scabiosa of deep rose suffused with salmon. A "must have". Pkt. 15c.

Salmon Beauty. Pure salmon with huge flowers. Vigorous. The stems are long and stiff, making it a most popular flower for garden or cutting. Pkt. 15c.

Imperial Hybrids Mixed. An improved Blue Moon type flower, entirely different from the existing Scabiosa varieties. Fully double, extremely large and deep. Petals broad and wavy, entirely eliminating the pincushion center; rich deep lavender blue. Tall growing and very upright with long, wiry, heavy, stems in which the weak neck of the older types is completely eliminated. Ideal for cutting. Pkt. 15c.

Shasta. Pure white, very large flowers. Pkt. 15c.

Giant Hybrids. Mixed. Pkt. 10c.

HARDY PERENNIAL VARIETIES

Caucasica (p) Grp. 5. Giant Hybrids (Isaac House Strain). Fringed and ruffled, shades of blue from lavender to dark blue; very large flowers. Pkt. 15c.



SALPIGLOSSIS

SNAPDRAGON

Antirrhinum (a) Grp. 4

SUPER GIANTS, RUST RESISTANT

Campfire. Luminous scarlet. Pkt. 25c.

Copper Queen. Bronzy copper. Pkt. 25c.

Crimson. Fiery crimson. Pkt. 25c.

Paradise Rose. Rose pink. Pkt. 25c.

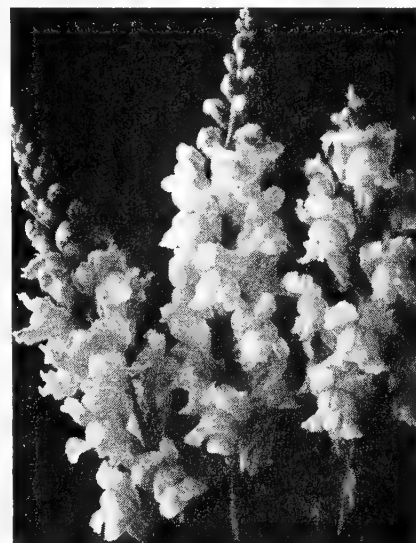
Rosalie. Rich deep rose with underlying tone of topaz or amber. The plants are base branching and produce from 6 to 8 huge long flowering spikes on which the florets are decidedly well arranged. An all-purpose Snapdragon. Pkt. 25c.

Cherry Rose. Described and illustrated in color on Novelty page; front cover inside. Pkt. 25c.

Yellow Giant. Deep yellow. Pkt. 25c.

Finest Mixed. Pkt. 15c.

Tetra. Largest flowered of all snapdragons, many individual flowers are ruffled. Seed comes in a superfine mixture including all the best snapdragon shades: orange, yellow, peach, canary, bronze, orchid, crimson, scarlet, pink, white. Main spike 2½ feet tall with many laterals. Excellent for cutting. Pkt. 25c.



SNAPDRAGON

STOCKS, Gilliflower (a) Grp. 4

These popular flowers are easily grown, are so highly fragrant, and of such great beauty that they deserve a place in every garden. The Early Giant Imperial class are half-hardy annuals. Stocks are biennials, but if sown in early spring will bloom the same year. They are also valuable for winter forcing. In California Stocks are popular winter annuals.

Double Large Flowering Dwarf Ten Weeks. A wonderful strain for bedding. Pkt. 15c.

Beauty of Nice. It follows the Ten Weeks class in season of bloom. The plants are pyramidal in shape, branching above the base. Excellent for bedding and cutting. Height, 16 inches.

Finest Mixed Colors. Pkt. 15c.

GIANT IMPERIAL. Long stems and imposing spikes of large flowers make this the outstanding variety. It is about as early as Beauty of Nice and resembles it in habit, except that the plant is less spreading and taller. Height, 2 feet.

Yellow (Buttercup). Pkt. 25c.

Blood Red. Pkt. 25c.

Rose. Pkt. 25c.

Lavender. Pkt. 25c.

White. Pkt. 25c.

Finest Mixed Colors. Pkt. 15c.

EVENING SCENTED STOCKS

The flowers are small, mauve colored, similar to the Virginian Stocks but are delightfully fragrant toward evening. They are especially sweet after a rain.

Matthiola Bicornis (p) Grp. 5. Pkt. 10c.

STRAWFLOWER or IMMORTELLE

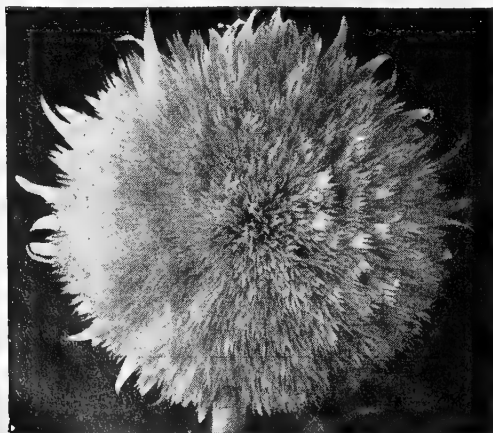
HELICHRYSUM (a) Grp. 2. The finest of all Everlastings. They make unusually fine winter bouquets if cut when partially opened and dried slowly in a dry place, heads downward to keep the long stems straight. The centers of the double pompon-like flowers are nearly covered by the stiff overlapping petals. A wide range of brilliant and soft colors. Height, 2 to 3 feet. **Finest Mixed.** Pkt. 15c.

SUNFLOWER

Helianthus (a) Grp. 2

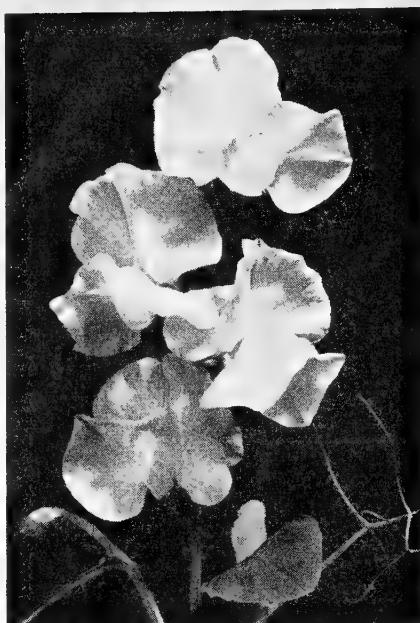
Sun Gold. New. Large double flowers of brilliant golden yellow Free flowering. Pkt. 10c.

Red Sunflower. Tall single flowered variety with bright red blossoms. Pkt. 10c.



HELIANTHUS, SUN GOLD

SWEET PEAS



THE NEW CUTHBERTSON

The new Cuthbertson strain is the greatest development in Sweet Peas for many years. Heat and drought no longer spell the end to the Sweet Peas in the garden. Where other types do not perform well, Cuthbertson's are the answer. They are very rugged, producing tremendous blooms on long stems. Ten days earlier than Spencers.

Cuthbertson's Mixed Blend. An excellent range of 25 to 30 colors, well balanced. Pkt. 10c.

SPENCER SWEET PEAS

CHOICE MIXTURE

Pkt. 10c; oz. 50c.

ALL COLORS: Pkt. 15c; oz. 75c.

PINK AND ROSE SHADES

Rose Pink. Silver Medal, All-America Selections, 1940. Large, wavy, rose-pink flowers on white ground. New type, maturing between the early flowering and the Spencer classes. Is taller and has longer stems than either of the others.

Patricia Unwin. Salmon pink on a cream ground.

Pinkie. Rose-pink with large and frilled flowers. This variety is seldom affected by weather conditions and first-class Blooms can be cut all during its long blossoming period.

Jack Hobbs. Cream-pink, flushed scarlet. One of the largest Sweet Peas ever introduced.

Miss California. The color is a beautiful shade of rich pink, deeply flushed and shaded with salmon. Unsurpassed for either exhibition or cutting purposes.

LAVENDER AND BLUE SHADES

Ambition. Rich deep lavender, with a darker shade on the base of the standard and wings, lessening as the bloom ages. Gold Medal and Award of Merit.

Flagship. Deep navy blue.

Reflection. A beautiful shade of clear blue.

WHITE AND CREAM SHADES

Gigantic. An enormous white frilled flower of exquisite texture and artistic form. Black seeded.

Cream Gigantic. Large ruffled flowers of perfect form, free from pink or blush tinge. Black seeded.

ORANGE AND SALMON SHADES

Pirate Gold. Golden orange.

Smiles. Clear glistening salmon best describes this exquisite variety. The large flowers are beautifully waved and fluted.

CERISE SHADES

Mrs. A. Searles. Salmon-cerise, merging into a soft oriental red. A remarkable and distinct color.

Artiste. Clear Geranium pink; a rare color. Flowers are large and quite frilled. An outstanding Sweet Pea.

RED SHADES

Red Supreme. Deep crimson; an abundance of flowers on long stems.

Welcome. By far the best and most brilliant, dazzling, scarlet Sweet Pea. For exhibition or gardens it is supreme. Absolutely sunproof.

MAROON AND PURPLE SHADES

Warrior. Rich chocolate maroon. A magnificent variety which has held its place and popularity for a number of years.

Olympia. Deep rich purple of graceful form and immense size.

RUFFLED VARIETIES

All Colors. Pkt. 15c; oz. 75c.

Bonnie Ruffles. A beautiful salmon-pink.

Blue. Soft mid blue shade.

Crimson. Rich satiny crimson, ruffled and waved. Long stems.

Exquisite Ruffled. Sparkling salmon-cerise; large ruffled.

Rose. Soft rich rose, large and ruffled

White. Pure white.

Ruffled Mixed.

CULTURE OF SWEET PEAS

Sweet Peas are deep rooting and heavy feeding plants. We recommend a trench to be dug about 18 inches deep and 18 inches wide. In the bottom fork in about 6 inches of well-rotted manure. Fill in with soil in which is mixed a liberal quantity of well-rotted manure.

The actual sowing is done in a shallow trench 6 to 8 inches deep. Cover the seeds with 2 inches of soil and press firmly. The balance is filled in as the plants grow, thus establishing deeper roots than would otherwise be possible. Use one ounce of seed to 20 feet of the row and later thin out so that the plants will be 4 to 5 inches apart.

If flowers are kept picked and seed prevented from forming more and better bloom will be produced. Avoid overhead watering as it causes the flower buds to drop.

Time of Sowing: Spencer varieties may be sown in early October and lightly mulched in winter. Fall sowing gives finer flowers and longer stems and a slightly longer period of bloom.

In California, Early Flowering varieties are sown about August 1 and throughout the winter months. If sown in August they will bloom by November. Keep the surface of the bed cool by using a light mulch.

GIANT WAVED SWEET PEAS CHOICE SPENCER MIXED

This mixture is grown from a special formula which has been built up and perfected during many years. It contains over forty of the very best standard varieties of the most recent introductions, all waved and giant flowering. Pkt. 15c.

SWEET SULTAN

Centaurea (a) Grp. 2

These beautiful long stemmed flowers with their soft velvety heads make very enchanting bouquets. They measure 2 to 2½ inches across while the entire plant stands about 2½ to 3 feet tall. You can grow them readily in any garden soil, and your friends are sure to admire them. Mixed. Pkt. 10c.

SWEET WILLIAM

Dianthus Barbatifolius (b) Grp. 5

A well known, attractive, free-flowering hardy biennial, producing a splendid effect in beds and borders with their rich and varied flowers. Height, 10 to 20 inches.

Single Varieties. Mixed. Pkt. 15c.

Double Varieties. Mixed. Pkt. 25c.

Sweet Wivelsfield. Quite distinct from the annual Sweet William—described under Pinks. Single Mixed. Pkt. 10c.

VIOLA, Tufted Pansies (a) Grp. 4

Waller Franklin Formula Mixture. This blend of bright gay colors far surpasses any mixture of *Violas* we have seen. Bright shades of self colors of red, yellow, blue, and apricot combined with many shades which are blotched, undoubtedly make these *Violas* a supreme mixture. Pkt. 25c.



VERBENA

VERBENA (a) Grp. 4

One of the most popular garden annuals for beds and massing and for a gorgeous display during the summer months. Cannot be excelled, commencing to flower in July and continuing until frost. Height, 6 to 8 inches.

Floradale Beauty. A giant hybrid, the flowers varying from bright rose-pink to deep rose-red of exceptional brightness. Individual florets of perfect form, fully rounded, and average 1¼ inches across; heads 4 to 5 inches across. Pkt. 25c.

Hybrid Grandiflora Giant. Mixed. Very large flowers in lavender, white, pink and rose-red. Pkt. 15c.

WALLFLOWER *Cheiranthus* (Grp.5)

English Wallflower (p) Spring blooming low erect perennial, in appearance much like stocks but flowers include yellow, yellow-brown, red and almost black. Sweetly fragrant. In mild climates plant in fall for early spring bloom and where winters are severe they should be carried over in a frame and set out early in spring. May be sown early in March for bloom the first year but the former method gives better flowering plants. Pkt. 15c.

Siberian Wallflower (*Cheiranthus Allioni*) (b). This unusual little plant deserves a place in your rock garden or low border. Upright spikes bear numerous four-petaled flowers of dazzling rich orange. Flowers the first season from seed and when established will bloom all summer. Height, 1 foot. Single. Pkt. 15c.

ZINNIA (a) Grp. 1

One of the most showy and satisfactory of our hardy annuals for beds, mixed borders and for cutting purposes. Easy to grow in any good garden soil. They commence flowering early in summer and continue until frost.

CALIFORNIA GIANTS. This variety is taller than the Dahlia flowered type, 3 to 4 feet high, with long stems which make the flowers fine for bouquets. The blooms are large, flat and very graceful. **Finest Mixed Shades.** Pkt. 15c.

DOUBLE DAHLIA FLOWERED. 2½ feet. Enormous double flowers are produced on robust branching plants. The flowers usually have slightly hollowed center ringed with small tubular florets. Crisp, fresh appearance.

Dream. Deep rosy lavender. Pkt. 15c.

Exquisite. Light rose, deep rose centers. Pkt. 15c.

Golden Dawn. Golden yellow. Pkt. 15c.

Illumination. Deep self rose. Pkt. 15c.

Oriole. Orange and gold bicolor. Pkt. 15c.

Polar Bear. White. Pkt. 15c.

Scarlet Flame. Bright scarlet. Pkt. 15c.

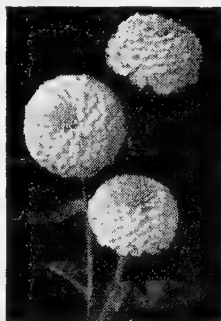
Will Rogers. Brilliant scarlet. Pkt. 15c.

Mixed. Pkt. 10c.

FANTASY. A new Zinnia type. Shaggy, medium sized flowers. Plant 2½ to 3 ft. high. Free blooming. Excellent cutting.

Wildfire. A rich, dazzling scarlet. Wildfire adds a distinct note of color and cheerfulness to the garden and will enliven any home when used in flower arrangements. Plants neat in habit, strong growing, and very free blooming, 2½ to 3 feet in height; coming into flower 45 to 50 days after seed is sown. Pkt. 15c.

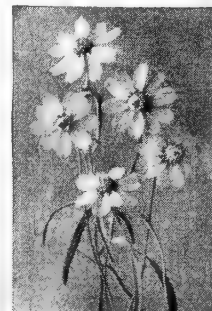
Fantasy. Mixed Shades. Pkt. 10c.



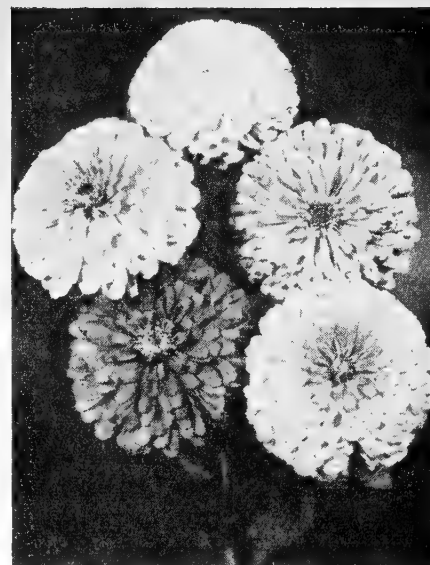
ZINNIA, LILLIPUT



ZINNIA, FANTASY



ZINNIA, LINEARIS



ZINNIA, DAHLIA FLOWERED

RED RIDING HOOD. 1 ft. Of compact form, covered the entire season with double scarlet flowers not over an inch across. Effective in borders. Pkt. 15c.

SUPER CROWN OF GOLD, Pastel Tints. The finest large-flowered Zinnia, with large well formed flowers. Contains a wide range of pastel shades, including soft yellow, old gold, light pink, various shades of salmon, peach, and buff, cerise salmon, white, and cream, each petal overlaid at the base with deep golden yellow. Flowers are borne profusely throughout the season on strong, robust plants. Mixed shades. Pkt. 15c.

DWARF MEDIUM FLOWERED

Early Wonder. Earliest of all Zinnias and the best Double Giant type for locations with short seasons. 18- to 24-inch base-branching plants produce 3- to 4-inch flowers on wiry, almost leafless stems. Bred for cutflower use. Does well in cool climate. **In Mixed Shades only.** Pkt. 15c.

DOUBLE LILLIPUT. 15 inches. A charming dwarf which is excellent for low borders or edgings. The plants are of tidy habit and produce a bounteous supply of very double pompon flowers about 1½ inches across. The colors are bright. Mixed. Pkt. 15c.

LINEARIS. This little dwarf variety of Zinnia is most unusual and interesting. The flowers are single and of a lovely shade of golden orange, with a delicate lemon yellow stripe through each petal. Blooms are produced in great profusion. Height, 8 to 10 inches. Pkt. 15c.



Lawn Grass Seed

KNOX'S SPECIAL BENT LAWN MIXTURE The Best All-Purpose Lawn Grass Seed

A wonderful mixture that is the result of years of experimenting. It is especially prepared by us from the highest quality seeds that can be produced. It makes a smooth, green, velvety lawn with a thick bottom, free from common grasses which are inclined to produce clumps or knots. Only the very finest varieties of the most suitable grasses for making an even, thick turf are used in this mixture. The various grasses composing this well-balanced blend are fine-bladed and deep rooting, sure to produce the best results under average conditions of soil and climate. It is all plump, heavy seed free from chaff or weed seeds. Sow 1 pound for a plot 10 by 17½ ft. (175 sq. ft.); 100 to 150 lbs. of seed are required to sow one acre.

Ask for Prices on Other Lawn Seeds

Astoria Bent. This strain of Bent differs from the Seaside variety in that it does not send out stolons, but spreads underground, sending up many root stalks that produce a splendid turf. The growth is upright, of fine texture and is a richer green than Seaside Bent. It is more practical for lawns and succeeds best in heavy soils. Sow 1 pound to 200 square feet. **Lb. \$1.80.**

Seaside Creeping Bent. Coos County strain, is the true creeping bent. The plant is dwarf and it multiplies rapidly by sending out runners in all directions; from these, new plants are produced, which in turn grow more runners. The turf becomes matted, and if damaged it heals over promptly. Sow 1 pound to 200 square feet. **Lb. \$1.80.**

Chewings Fescue. Used extensively on putting greens, fairways and tees on golf courses, and does well on any kind of soil. It also produces a stiff, upright plant. Sow 1 pound to 150 square feet. **Lb. \$1.15.**

Creeping or Red Fescue. Fine, round bladed grass, excellent for lawns. Slightly reddish at base. Fine for shade. Hardy. **Lb. \$1.25.**

Kentucky Blue Grass. Makes an excellent lawn of a dark green color. It forms a fine mat, and with care and water makes one of the best lawns. Sow 1 pound to 200 square feet. **Lb. \$1.40.**

Pacific Mixture. Used exclusively on the College of the Pacific campus. A very hardy, strong-growing mixture. Will stand extremely hard use such as playground or back yard. Considerably coarser than Knox's Lawn Mixture. **Lb. 75c.**

Red Top. A fine-bladed grass that succeeds on almost any soil, although it does best under moist conditions. It is used in almost all lawn mixtures. Should not be planted by itself unless specifically recommended. Sow 1 pound to 200 square feet. **Lb. \$1.10.**

Rye Grass. A rapid growing grass where quick results are required. It is coarser than Kentucky Blue Grass and thrives in poor soil. It is used as a "nurse" crop in mixture to keep the lawn green while the better, slow-growing varieties are becoming established. Sow 1 pound to 150 square feet. **Lb. 40c.**

Shady Blue Grass (Poa trivialis). An ideal perennial grass for shady spots which is closely related to Kentucky Blue Grass, but somewhat finer and softer in texture. It is a creeper with an apple-green color. Requires plenty of water. Sow 1 pound to 200 square feet. **Lb. \$1.60.**

Shady Lawn Mixture. This grass is especially adapted for growing in very shady places or near buildings where other grasses will not grow. If you have a shady, barren place, try our Shady Lawn Mixture. Sow 1 pound to 200 square feet. **Lb. \$1.00.**

White Dwarf Clover. Very low growing sort, principally used in poor ground to give a green cover. Many like it in lawns, especially where grass does not do well. Sow 1 pound to 300 square feet. **Lb. \$1.55.**

HOW MUCH SEED?

You can figure how much lawn seed you need from the table below, which is compiled on the basis of 1 pound of seed for 175 square feet of lawn.

Area in sq. ft.	Size of area	Lbs. seed required
175	10x 17½	1
250	10x 25	1¼
625	25x 25	3½
1000	20x 50	5¾
1250	25x 50	7
1875	25x 75	11
2500	25x100	14
3750	50x 75	22
5000	50x100	28
5625	75x 75	31½
7500	75x100	42
10000	100x100	56

How to Have A Good Lawn

A well made lawn will last a long time, so it pays to be thorough in preparing the soil.

Drainage is the first consideration. Water logged soil will not support a good turf. Tiling is one way to promote good drainage; another is to work liberal quantities of sand and gravel into the subsoil.

Topsoil is important. In many gardens the site for the lawn is covered to a considerable depth with subsoil from the basement excavation. If you cannot prevent this the next best thing to do is to have the lawn site covered with a 6-inch layer of good loam. Into this top layer of live soil work garden compost, peat moss and commercial fertilizer.

At this point it is a good idea to rake the ground roughly and water it well to bring up the weeds. When they come up chop them off. Repeat the watering and hoeing until the weeds have been considerably reduced in numbers.

Roll the ground before seeding, to prevent it from settling unevenly, and then rake the surface lightly. Sow the seed so as to cover the ground thoroughly, and then cover it lightly with soil. Roll again so as to press the seed in firmly. If you have no roller, use boards and tramp on them so as to pack the ground firmly, but a roller is preferred.

Grass seed will germinate in from 8 to 15 days, according to the weather. If a lawn is made during the summer, the ground should be covered lightly with peat after the seed has been rolled, so as to retain the moisture. New lawns should not be allowed to dry out, not even for a half day. For the first 15 days the lawn should be watered twice a day if necessary. A lawn should be fertilized after the first cutting, and at least twice a year. Water well after applying.

WARNING: Do not use the so called rotted manure which is being sold to inexperienced gardeners. It may be full of wild clover and other weed seeds and pests. It is expensive when you take into consideration that a few pounds of good fertilizer is equal to a sack of manure. If you want a moisture-holding material for top-dressing use peat. We recommend the use of peat.

FERTILIZERS

*Just a Little Thought -
But a Big Difference ---*

Grass is food for many creatures but what about food for the grass? We have it and can tell you all about its use. Good lawn fertilizer is a specialty of ours.

ALL SOLD AT CURRENT MARKET PRICES. ASK FOR QUOTATIONS.

Ammonium Sulphate is a valuable fertilizer for all plants in which a large leaf development or rapid growth is desired. It will stimulate growth almost immediately. It is also used for top-dressing lawns, producing a thick velvet growth and discouraging the weeds. It is a highly concentrated nitrogenous product, containing 25¼ per cent ammonia, 20% per cent nitrogen. One pound to 200 square feet is sufficient application for lawns.

Bone Meal. Extra fine; is a fertilizer recommended for lawns, rose bushes, grape vines, especially where a moderately slow fertilizer is needed for the deep-rooted shrubbery and where a perfectly safe fertilizer is required. It contains phosphoric acid and some nitrogen.

Granulated Peat Moss. For greenhouse, garden and home. Our peat moss is of the finest quality you can buy anywhere at any price. Its use contributes to the humus content of the soil, lightening heavy clay and binding sandy soils. It insulates soil against freezing and thawing in winter and conserves moisture in summer. Clean, odorless and economical to use.

Sheep Guano. An efficient fertilizer to use on lawns, in the garden, the perennial border, shrubbery beds, small fruit garden, flower beds, etc. It is safe and dependable. A natural plant food and not a chemical stimulant.

Nitrate of Soda. A fertilizer for all crops; quick in action and hastens the maturity of crops fully two weeks. It should not be applied until the plants are above the ground. Do not allow solution to touch foliage. Dissolve 1 oz. to 2 gals. or 1 lb. to 50 gallons.

Superphosphate (Acid or Rock Phosphate) is a water soluble combination of phosphoric acid and lime which is formed by the action of sulphuric acid on raw phosphate rock. It aids in plant nutrition and assists the plant to assimilate other ingredients. Superphosphate is an efficient fertilizer element for lettuce, truck crops, cereal crops, and alfalfa.

Hydrated Lime. The constant watering of lawns tends to sour the soil and eventually the lawn becomes foul with sorrell, Creeping Charlie, and other weeds which thrive in an acid soil. This condition may be improved by applying hydrated lime.

Muriate of Potash. This fertilizer is especially valuable for fruit trees and berries.



Miller's GARDEN COMPOST MAKER

5 lbs. 80c
25 lbs. \$2.85

★ CONVERTS RUBBISH INTO FERTILIZER

★ USES GRASS CLIPPINGS, LEAVES, WEEDS, ETC.

A 5-lb. package of Miller's Garden Compost Maker will make several hundred pounds of high-grade, organic humus fertilizer by converting your garden refuse into a rich organic humus compost.

Important Ordering Suggestions

Free Transportation on All Flowers and Vegetable Seeds in Packets, Ounces or ¼ Pounds.

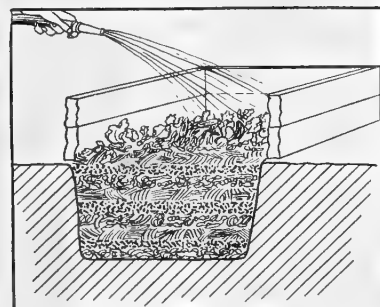
All seeds quoted in this catalog are shipped by Parcel Post, all transportation and packing charges are paid by us. C.O.D. and money order return fees are not considered as transportation charges and, therefore, must be paid for by the customer. Avoid them by sending remittance with order. Bulk seeds, such as Peas, Beans and Corn, in quantities, are shipped to your nearest express or freight office, transportation collect. If you wish them shipped by Parcel Post, please send necessary postage.

SHIPPING ORDERS. When goods are to be shipped by Freight or Express, give plain shipping directions; otherwise we use our best judgment in routing. Goods on which we pay transportation are shipped at our option.

SEND MONEY. Remittances should always accompany the order. Remittances may be made at our risk by any of the following methods (1st and best) **Post Office Order**; (2nd) **Bank Draft**; (3rd) **Express Company Money Order**; (4th) **Cash by Express** in amounts not less than \$50; (5th) **Registered Letters**.

NON-WARRANTY. We exercise the greatest care to have all of our seeds and bulbs of good quality and true to name. Once sold, however, their growing conditions are beyond our control. Therefore, we operate under the usual **Seedsmen's Non-Warranty**: We give no warranty, express or implied, as to the productiveness of any seeds or bulbs we sell, and will not be in any way responsible for the crop. Our liability in all instances is limited to the purchase price of the seed.

Don't forget the Compost Pile



You have a rich source of indispensable humus right in your own garden. How to make use of it? The compost pile is the answer.

All of your lawn clippings, weeds, vegetable tops, potato peelings and any other vegetable matter can be thrown into a pit or bin. When a layer a foot or so thick has accumulated sprinkle a compost maker over the top and cover the whole with about 2 or 3 inches of soil. Repeat the whole process until your compost pile is three or four feet deep. Keep the pile moist to hasten the rotting.

In about 6 months the compost pile will be ready to use. Spread it on the garden as you would barnyard manure. Used with peat moss and commercial fertilizers compost is a really important aid to good gardening.



Vegetable Seeds

Long experience enables us to offer you this carefully chosen selection which we know will give the best results in this area. Varieties suitable for freezing marked (Fz.).

No matter how much work and care you put into your vegetable garden you can not expect good results unless you use reliable seed. We pride ourselves on the quality of our seeds and sell them with the confidence that you will find them the best.

ASPARAGUS

1 oz. to 100 ft., 4 lbs. per acre.

Soak seed 24 hours, sow in spring, 15 to 20 seeds to the foot. Cover 2 inches. Transplant to permanent beds the next spring.

Mary Washington. The most extensively grown variety. Large green spears with tight, purple-tinted tips, of fine quality. Heavily productive and very uniform. (Fz.) Pkt. 10c; oz. 25c.

BEANS

Bush, 1 lb. to 150 ft., 50 to 60 lbs. per acre.

Pole, 1 lb to 150 hills, 30 to 35 lbs. per acre.

Lima, 1 lb. to 150 ft., 30 to 50 lbs. per acre.

great quantity of beautiful light green beans. The pods grow 6 to 7 inches long. They are round, extremely meaty, and absolutely stringless. 54 days. (Fz.)

Bush, Wax Pod

Prices: Pkt. 10c; ½ lb. 35c; 1 lb. 60c.

Average maturity 52 days from seed.

Black Wax, Pencil Pod. Very desirable for home and market garden and for truckers. Plants large and thrifty. Heavily productive over long period. Pods handsome bright yellow, 5½ to 6 inches long, ¾ inch thick, cylindrical: very fleshy, stringless, brittle, fine grained, and tender. Quality unexcelled.



ASPARAGUS

Bush, Green Pod

Prices: Pkt. 10c; ½ lb. 35c; 1 lb. 60c.

Dwarf Horticultural. Particularly desirable green shell and snap bean for home and market garden. Plant medium high, thrifty and productive. Pods dark green at snap stage (53 days).

Improved Stringless Green Pod. High quality for home and market garden. Plant large, thrifty, heavily productive. Pods medium green, 5½ inches long, almost ½ inch wide and equally thick. Very fleshy, strictly stringless, fine grained, tender. Seeds coffee brown. 53 days.

Baccicia. 55 days. A heavy producer with pods up to 6 inches in length. Stringless. An excellent canner. Pkt. 10c.



BEAN, KENTUCKY WONDER



WAX BEAN



LIMA BEAN

Kidney Wax, Round Pod. (Brittle Wax.) Valuable for home garden and canning. Plants are erect, medium large, prolific. Handsome pods of waxy light yellow, $5\frac{1}{2}$ to 6 inches long, thick and round. Very fleshy, brittle, strictly stringless and without fibre. Seeds white with brownish-black eye.

Golden Wax, Top Notch. Blight resistant. A splendid home garden and canning variety. Plant small, productive. Pods very attractive; golden yellow; $4\frac{1}{2}$ to 5 inches long, $\frac{1}{2}$ inch wide, thick, oval; fleshy, brittle, stringless. Seeds white, splashed with violet, carmine and purple.

Pole Beans

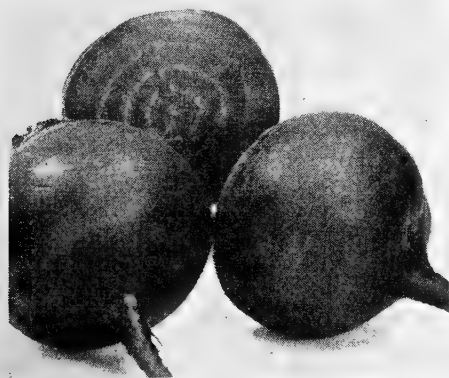
Prices: Pkt. 10c; $\frac{1}{2}$ lb. 35c; 1 lb. 60c.
Mature in 75-80 days.

Blue Lake or Improved White Crease-back. Splendid snap bean for home garden and early market. Good climber, heavily productive. Pods light green, $5\frac{1}{2}$ inches long, $\frac{1}{2}$ inch wide, almost as thick; nearly stringless, very fleshy, brittle, tender. Seeds white; excellent for baking.

Kentucky Wonder. The oldest favorite of all pole beans should be in every garden. The dark green pods are round and curved, measuring 9 to 10 inches; they are stringless when young. Seeds light brown.

Kentucky Wonder Wax. An early and hardy bean somewhat resembling the Kentucky Wonder except in color of pods which are light yellow and broader. If a wax podded bean is desired this is the one best variety to plant. Seed oval, flattened, somewhat shriveled, dark brown.

Oregon Giant. We highly recommend this variety to Northwest home gardeners. It keeps producing until killed by frost. Large, fleshy pods, 10 to 12 inches in length, stringless, light greenish yellow, splashed with red. A very tasty bean that requires very little care.



BEET, DETROIT DARK RED

Potomac. Six inches long, slender and round, this stringless meaty bean is a good climber and heavy producer. The snap beans are excellent for home or market. (Fz.)

Lima Beans, Bush

Prices: Pkt. 10c; $\frac{1}{2}$ lb. 35c; 1 lb. 60c.

Burpee's Improved Bush. Plants large, heavily productive. Pods large, $4\frac{1}{2}$ to 5 inches long. Usually contains 4 large, thick beans. Dry beans large, flat, greenish white. Mature in 75 days.

Cangreen. All-American Selection. Honorable mention 1943, 68 days to maturity. In all other respects resembling the Henderson Bush Lima, Cangreen is notable for the green color of the fleshy part of the seed in the dry stage. Attractive for canning, either commercially or in the home. Yields a prolific crop.

Fordhook 242. Developed by the U. S. Department of Agriculture. Large, spreading plant with slightly curved pods containing 3-4 light green beans of excellent quality, good for canning and freezing. Good in high temperature (Fz).

Lima Beans, Pole

Prices: Pkt. 10c; $\frac{1}{2}$ lb. 35c; 1 lb. 60c.

Oregon Pole Lima. Proven over many years to be well adapted to our cool Northwest climate. A strong, vigorous grower, bearing continuously until frost. Pods are at their best when yellow.

"Freeze Your Garden"

You can enjoy the goodness of your own garden fresh vegetables the year around by freezing them. No other method of preserving can give you more appetizing and flavorful vegetables for your table.

The letters (Fz) after certain descriptions indicate the best varieties to freeze.



BEET

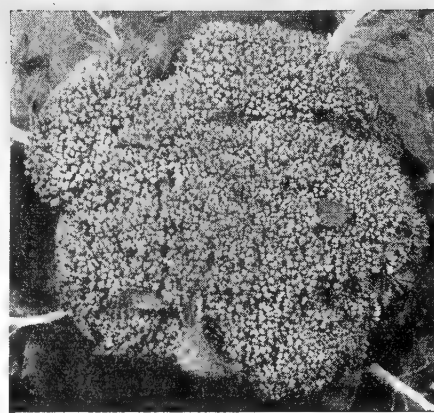
1 oz. to 100 ft., 4-6 lbs. per acre

Prefer a rich sandy loam but will produce in any well fertilized soil. Space rows 14 to 24 inches apart. All varieties: Pkt. 10c; $\frac{1}{2}$ oz. 15c; 1 oz. 25c.

Detroit Dark Red. The standard of excellence in table beets for home and market garden, for shipping, and for canning. Tops uniform, small, slender, erect. Roots globe shaped; symmetrical, with small collar and small tap-root. Very dark blood red. Mature in 52 to 55 days.

Early Wonder. Very desirable for home and market garden. Tops small. Root flattened globe shape and small collar and tap-root. Dark purplish red. Flesh deep purplish red zoned a lighter shade. Mature in 50 to 55 days.

Extra Early Flat Egyptian. Best for forcing and particularly valuable for early market. Tops small and upright. Roots flattened, with long slender tap-roots. Flesh dark purplish red zoned lighter. Ready in 50 days.



BROCCOLI

Mangel (or Stock Beet)

1 oz. to 100 ft., 6 to 10 lbs. per acre.
Valuable as stock feed. All varieties of mangels: 1 oz. 25c; $\frac{1}{4}$ lb. 60c.

Danish Sludstrup. Very high yielder. Roots long oval, orange colored; flesh white with faint yellow tinge.

Giant Half Sugar. This variety is one of the favorites among the dairymen and hog raisers. It is very sweet and nutritious, as it has a higher sugar content than the ordinary mangel.

True Sugar Beet. The most desirable beet for sugar manufacture. Valuable for stock feeding. Roots medium large, 12 to 15 inches long, $3\frac{1}{2}$ to 4 inches at shoulder, tapered; white, with a tinge of gray; very rich in sugar. Good keeper.

BROCCOLI

$\frac{1}{2}$ oz. to 100 ft., 4 oz. per acre.

This is similar to cauliflower and is especially suited to Pacific Coast states. Pkt. 10c.

Italian Green Sprouting. This vigorous plant is entirely different from the white heading sorts. Cultivated like cabbage, it bears a succession of sprouting heads which, if kept cut, will be replaced by others for 8 to 10 weeks. Each sprout, about 5 inches long, ends in a small head of dark green buds. It is one of the most delicious green vegetables. (Fz.)

St. Valentine. Standard market variety for March shipment. Plants large. Heads large, solid, white, and very well protected.

BRUSSELS SPROUTS

$\frac{1}{2}$ oz. to 100 ft., 4 oz. per acre.

Can be successfully grown wherever conditions are favorable for late cabbage and require the same method of culture. They mature best in the autumn after the weather becomes cool. Pkt. 10c.



Dwarf Improved. Plants dwarf and compact, 20 inches tall. Very uniform; stem well covered with firm, round cabbage-like balls $1\frac{1}{4}$ to $1\frac{1}{2}$ inches in diameter mature in succession. Pick as needed.

HOTKAPS



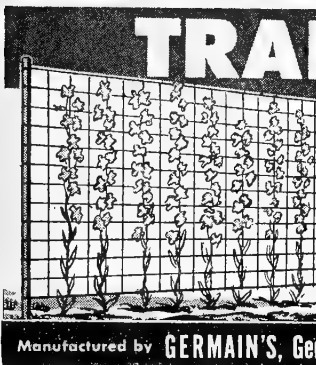
FROST CAN'T HARM PLANTS — Have vegetables 3 weeks earlier. Patented paper hothouses — completely protect plants from destructive Frosts, Storms, Insects. Ripen crops 3 weeks earlier; increase yield 18% to 51%; maintain perfect Mulch. **Big Garden Pkg. of 25—only 70c. Setter Free.**

TWIST-EMS



NEW HANDY PLANT TIE — A twist of the wrist and plant is tied! Strong, dark green "invisible" tapes with wire reinforcing. TWIST-EMS protect stems, permanently support annuals, perennials, vines, shrubs, vegetables. **Box of 250, 4-inch size, 35c. Box of 125, 8-inch size, 35c. Box of 125, 16-inch size, 65c.**


TRAIN-ETTS



NEW WEATHERIZED TRELLIS NETTING — Ideal support for Sweet Peas, Garden Peas, Pole Beans, Tomatoes, etc. Hung with ease in 5 minutes. Use instead of tedious string tying or wire supports that burn delicate tendrils in the hot sun. Lasts several seasons. **3 sizes: 60"x72", 65c; 60"x90", 85c; 60"x180", \$1.25.**

Manufactured by **GERMAIN'S, Germaco Products Div., Los Angeles 21**

CYCLONE SEED SOWER



A machine which should be on every farm. It is light, strong and durable, and with ordinary care will last a lifetime. It will sow clover, corn and grass seeds and fertilizers of all kinds perfectly even, and any desired quantity per acre by following the simple directions on every machine.

Price \$3.50
Weight 5 pounds

Terra-Lite HORTICULTURAL VERMICULITE

Amazing Disease and Weed Free Garden Aid

Use as it comes out of the bag for germinating seed . . . rooting cuttings . . . planting bulbs and plants . . . preparing seed beds for lawns . . . lightening heavy soils . . . mulching to conserve moisture.

Small size (4 qts.) 40c, 50c by mail; Medium size (1/2 bu.) 85c, \$1.00 by mail; Large size (2 bu.) \$1.85 (weighs 16 lbs.) shipped charges collect.

Ask for FREE Descriptive Pamphlet



We Use and Recommend for Seeding, Transplanting, Growing

PLANT-CHEM

A scant spoonful makes a Gallon of Rich Plant Food

4 safe, odorless, easy to handle, concentrated plant foods with all nutrients, trace elements and growth hormone

PLANT-CHEM	LAWN-CHEM
25c size makes 16 gal.	50c size makes 100 gal.
\$ 1.00 size makes 100 gal.	\$ 1.50 size makes 400 gal.
2.00 size makes 400 gal.	4.00 size makes 1200 gal.
15.00 size makes 5000 gal.	12.00 size makes 5000 gal.

PLANT-CHEM ACID FOOD	PLANT-CHEM ORCHID FOOD
25c size makes 16 gal.	50c size makes 16 gal.
\$ 1.00 size makes 100 gal.	\$ 2.00 size makes 100 gal.
2.00 size makes 400 gal.	10.00 size makes 1200 gal.
15.00 size makes 5000 gal.	22.50 size makes 5000 gal.

POUR IT ON—WATCH 'EM GROW

THE GUN THAT MAKES LAWN AND GARDEN SPRAYING FUN!

INSECT-O-GUN



SPRAYS

- WEED KILLERS
- INSECTICIDES
- FUNGICIDES

NO PUMPING
NO HEAVY TANK TO CARRY
NO CLEANING PROBLEM

—JUST FILL JAR
—COUPLE TO GARDEN HOSE
—GARDEN HOSE DOES THE WORK

ADJUSTABLE SPRAY — Insect-O-Gun's exclusive patented trigger controlled Mixing Pump allows you to adjust its deadly mist to gently spray the tenderest plant or power spray the hardest tree. Correct spray angle for full under-leaf coverage gets all the bugs.

FULLY GUARANTEED . . . COMPLETE INSTRUCTIONS ON CARTON
3-GALLON SIZE \$5.95



CABBAGE, EARLY JERSEY WAKEFIELD

CABBAGE

Sow early varieties under glass and transplant to open ground as early as possible. Sow late varieties in open in April and May. Keep the crop well watered and cultivated. Best in good, heavy soil with good drainage; light soils should be well fertilized. Shallow but frequent cultivation!

EARLY VARIETIES

Mature between 60-65 days.

Copenhagen Market. Distinctly and uniformly early. Splendid for early market and shipment; valuable as an early kraut variety. Plants small, compact, allowing very close planting. Stem short; heads uniformly round; firm; 6 to 7 inches in diameter. Weight, 3½ to 4 lbs. Interior clear white and of excellent quality. Mature in 66 days. ½ oz. 40c; 1 oz. 75c.

Early Jersey Wakefield. Extremely early variety, very valuable for home and market garden as well as for shipment. Plants very small and compact, allowing close planting; stem short. Heads firm and conical; usually 7 inches long, 5 inches thick near base; weight, 2 to 2¼ lbs. Pkt. 10c; ½ oz. 30c; 1 oz. 50c.

Golden Acre. The earliest round-headed cabbage; especially valuable for early market and shipping. Plants very small and compact; stem short. Heads uniformly round; firm, commonly 6 inches in diameter and weigh 3 pounds. Pkt. 10c; 1 oz. 75c.



CABBAGE, DANISH BALL HEAD

LATE VARIETIES

Mature in 90 to 100 days.

Danish Ball Head. This is the best late cabbage. The plants are medium sized with short stems. Heads large; flattened globe shape; becomes 8 to 9 inches across, 6 to 7 inches deep, and weigh 7 to 9 pounds. Very firm and solid; of excellent quality; keeps perfectly in storage until late spring. Pkt. 10c; 1 oz. 75c.

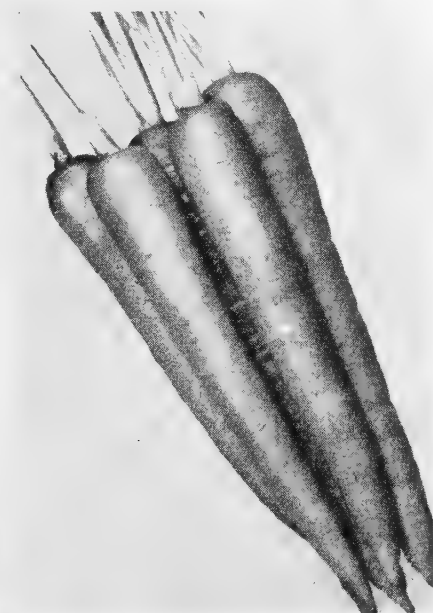
Late Flat Dutch. The best very large, late cabbage. Popular for home and market garden. A good keeper. Heads very large and flat, but deep; become 12 to 14 inches across, 7 inches deep, and weigh 12 to 14 lbs. or more; firm, good quality. Pkt. 10c; 1 oz. 50c.

Mammoth Red Rock. A sure cropper and used very extensively for pickling. The solid heads are borne on medium-length stems and are red throughout. Perfectly round, solid as a rock, and quite large. Often weighing 6 to 8 pounds each. The latest of the red cabbages. Pkt. 10c; 1 oz. 50c.

Savoy. Enjoys great popularity on account of its tasty flavor which is more delicate than that of ordinary cabbage. The large round heads are somewhat flattened and very heavy. The deep green, crinkled outer leaves enclose the tender, light green heart. It matures late in the fall and will keep all winter. Pkt. 10c; 1 oz. 75c.

CHINESE CABBAGE

Wong Bok. This exceptionally fine vegetable is rapidly growing in public favor. It resembles the Cos lettuce, forming long heads of crisp leaves. Very mild and pleasant flavored. Serve as a salad or cooked. Pkt. 10c; 1 oz. 75c.



CARROT, EMPEROR

CARROTS

½ oz. to 100 ft., 3 to 4 lbs. per acre.

Sow from April to July. Prefer a light, sandy soil. Pkt. 10c; 1 oz. 25c; ¼ lb. 75c.

Chantenay, Oregon. Flesh is a deep golden orange color, always smooth and fine in texture, very tender. Excellent bunching variety and preferred by market growers. Medium early. 72 days.

Chantenay, Red Core. A fine carrot. Flesh tender and sweet, reddish orange in color with the core indistinct and of about the same color as the surrounding flesh. Suitable for canning and table use. 72 days.

Danvers Half Long. Red core. The roots are a rich dark orange and because of its symmetrical shape—long and pointed—it makes an excellent bunching variety. It has proved over a period of years to be the most popular carrot, both with the grower and the shipper. Mature in about 75 days.

Improved Imperator. This carrot grows to a length of 7-8 inches with a shoulder diameter of 1¼ to 1½ inches, making a smooth crown. Does not have undesirable side shoots; have a fine texture, and is good and sweet. Deep orange. In all respects it is very attractive for shipping purposes. 77 days.

Nantes Coreless. Excellent for forcing, as well as for home and market garden use. Tops very small. Roots bright orange, cylindrical, blunt tipped. Flesh reddish orange, crisp, tender and of very delicate flavor. Practically coreless. 68 days.

Stock Carrots

1 oz. 25c; ¼ lb. 75c.

Orange Belgian. A very productive variety, with roots measuring 20 inches long. They are broad at the shoulder, and gradually taper to a fine point. The skin below the ground is a light orange, but above the soil surface it is green. Will yield heavily, particularly on good deep soil.

White Belgian. A late variety, an excellent keeper and very productive. Principally grown as stock feed, since it will yield as much as 40 tons per acre. Roots are 7 to 8 inches long, 3 inches across at the top, tapered and pointed.

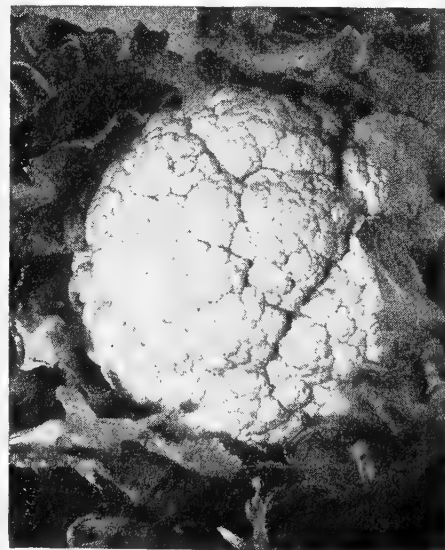
CAULIFLOWER

½ oz. to 100 ft., 4 oz. per acre.

Treat the same as cabbage but gather the tops of the leaves together loosely as soon as the heads begin to form. Pkt. 15c.

Early Snowball. (52 days.) The best for greenhouse forcing, early market, and shipping. Plants very dwarf. Heads snow white, deep, smooth and compact; about 6 inches across, weighing about 1½ to 2 pounds. The standard of excellence in cauliflower. (Fz.)

Ideal (All America Winner). This new cauliflower is described as being of highest quality and excellent taste; easily grown, being frost and heat resistant, and of high yield. Even in poor soil and under raw, changing weather conditions it has come through with good results when other varieties have failed. Sow in June or July, crop in autumn. Pkt. 25c.



CAULIFLOWER

Preparing Vegetables for Freezing

Fz indicates varieties suitable for freezing.

1. Use only the finest vegetables obtainable.
2. Prepare and freeze vegetables as quickly as possible to preserve the vitamins, texture and flavor.
3. Scald vegetables by placing in colander, strainer or similar container and immerse in rapidly boiling water. Use only small quantities so water will come to boil within half a minute after vegetables are added. Count only the time that the water is boiling. Drain quickly.
4. Cool by immersing immediately in cold water, preferably ice water. When vegetables are thoroughly cooled remove and drain.
5. Pack in suitable airtight containers such as waxed cardboard cartons, tempered glass jars or lacquered tin cans. Allow 1 to 1½ inches space for expansion in freezing.
6. Place in quick freeze immediately after packing.

Asparagus. Wash and cut into desired lengths, blanch 2 to 3 minutes.

Green Lima Beans. Shell and scald 1 to 1½ minutes.

Green Beans. Wash, stem and string. Scald whole beans 5 to 6 minutes, cut beans 2 to 3 minutes, French cut beans, 1 to 2 minutes.

Brussels Sprouts. Soak in salt brine or cold water 15 minutes. Scald 3 to 4 minutes.

Cauliflower. Break into flowerets, soak 5 minutes in brine, scald 2½ to 3½ minutes in brine.

Carrots. Wash and dice or slice. Small carrots may be left whole. Scald diced or sliced carrots 2 to 3 minutes, whole ones 3 to 5 minutes.

Corn on the Cob. Husk, trim and wash. Scald, a few ears at a time, for 1 to 2 minutes. Chill thoroughly in ice water, drain and wrap each ear in parchment paper or moisture proof locker paper. THAW before cooking.

Whole Kernel Corn. Husk, trim and wash. Scald on the cob 2 to 3 minutes. Cut from cob, pack dry and seal tightly.

Peas. Shell and immediately scald for 1 to 1½ minutes.

Spinach. Blanch 1 to 2 minutes, a small quantity at a time. Avoid cooking. Stir gently while in the boiling water to prevent sticking together.

Zucchini. Use young tender squash. Wash, remove blossom ends, slice in sections 1 inch thick, scald 1½ to 2 minutes.

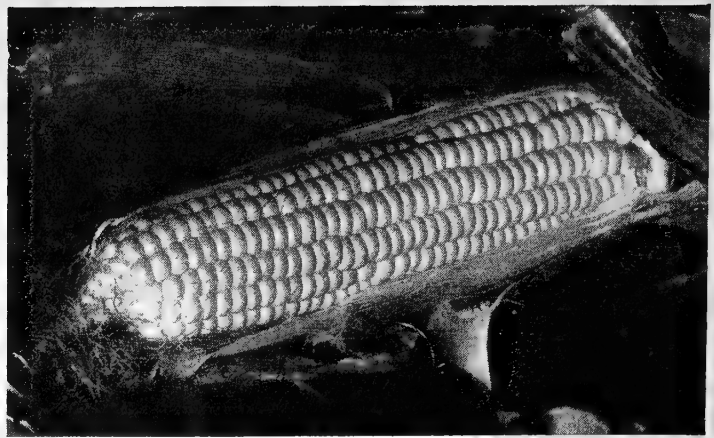
Note: In each case in the above directions it is understood that scalding is to be followed by draining, chilling, packing and quick-freezing.

CELERIAC

¼ oz. to 100 ft., 4 oz. per acre.

Give the same culture as celery, but do not earth up. Pkt. 10c.

Large Smooth Prague. An improved variety of turnip-rooted celery producing large tubers of nearly globular shape and comparatively smooth surface.



CORN, MARCROSS

CELERY

¼ oz. to 100 ft., 4 oz. per acre.

Sow from February to May, transplanting in June to rows 3 feet apart. One ounce of seed will produce 5000 plants. Pkt. 15c.



Golden Utah. A light yellow-green selection of the original "Utah". Has superb quality and size of original, plus easier bleaching quality.

Utah Jumbo Winter. A remarkable late celery of the finest quality. Plant sturdy, compact and solid. Very free from strings. Light green in color; nutty flavor.

CHICORY

1 oz. to 100 ft., 4 to 5 lbs. per acre.

Sow chicory when weather becomes warm and settled. Sow in rows at least 24 inches apart and thin to 3 inches between plants. Pkt. 10c.

Witloof or French Endive. Seed sown in spring produces long, thick roots by November. To force for use, dig roots in fall and trim the leaves off an inch above the crown. Trench in a warm, dark place, covered with 6 or 8 inches of soil and a top layer of fresh manure. A handsome, compact cluster of blanched leaves resembling Endive is the result. They are tender and have a rich, mildly acid flavor.

Large-rooted Magdeburg. Roots 12 to 14 inches long, 2 inches in diameter at top; tapered. The dried roots are often roasted and mixed with ground coffee.

CORN

Sweet corn, 8 oz. to 100 ft., 10 to 14 lbs. per acre.

Plant in rich, warm soil, in hills, 2 to 3 feet apart, in rows 3 feet apart for early kinds and 4 feet apart for late sorts. Make first sowing about the middle of May and continue fortnightly up to about the middle of July. Corn should be planted in blocks of at least 4 rows.

Hybrid

Pkt. 10c; ½ lb. 30c; lb. 50c.

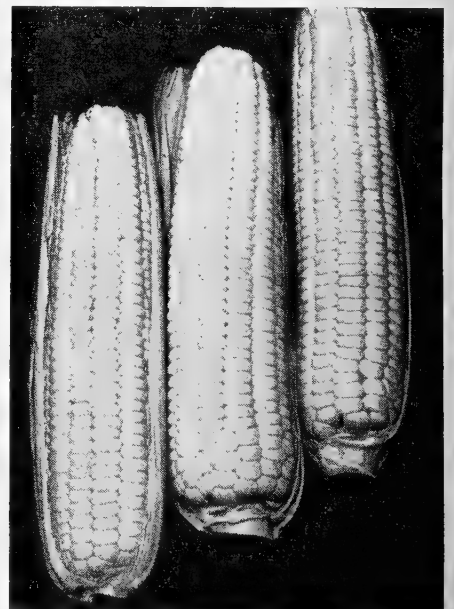
Listed in order of ripening.

Spancross. (73 days.) Very early. Well filled 6-inch ears of a medium yellow. Good quality. Plants grow 4 to 5 ft. tall.

Marcross. (76 days.) Stalks short but sturdy, highly resistant to bacterial wilt. Ears long; plump, abruptly tapered at tips; 10-14 rowed, with light cream-yellow medium-broad kernels of good quality.

Carmelcross. 79 days. Large, 8-inch ears, well filled with medium-yellow kernels. Good flavor and quality. Early. Plants 4½ to 5 ft. high.

Golden Cross Bantam. (88 days.) Very uniform in habit of growth, size, and maturity. The ears measure 8 inches long and they are closely set with 14 rows of light yellow grains filled with delicious sweet pulp. Bears two ears per plant. (Fz.)



CORN, GOLDEN CROSS BANTAM



CUCUMBER, IMPROVED LONG GREEN

CORN—Continued

Silver Cross Bantam. Fancy Edible. (80 to 86 days.) This is the sweet corn that will amaze you—because it has all the tenderness, succulence, and real corn flavor of the best yellow corn. Yet it's white! How come? Well, that's one of the many wonders you come across in hybrid creations. This corn was derived from Golden Cross Bantam, which it resembles in many respects. But the stalks are taller and the ears are longer and larger. But, above all, you like its flavor. Many folks who thought they didn't like white sweet corn at all, now prefer Silver Cross Bantam to any other variety! First choice for quality canning and freezing!

Open — Pollinated — Yellow

Pkt. 10c; ½ lb. 20c; 1 lb. 35c.

Golden Bantam. 8-row. (79 days.) Slender ears 5½ to 6½ inches long have 8 rows of even golden kernels of good flavor. Very sweet. Popular with the home gardener and for commercial purposes. (Fz.)

Golden Bantam Improved. (81 days.) A selection from the original strain of Golden Bantam. Larger ears, more rows of kernels, greater production. Golden yellow, deep, wide, tender kernels with a fine sweet flavor. Particularly desirable for canners and market gardeners. Remains in table condition a long time.

Golden Early Market. (77 days.) One of the best extra early yellow varieties for home and market garden. Ears have strong husks and 8 to 12 beautiful tender rows to each ear. Kernels golden yellow, medium, sweet and of good flavor.



EGGPLANT

CUCUMBER

1 oz. to 100 ft.. 3 to 4 lbs. per acre.

Mature in approximately 60 days.

Sow outdoor varieties early in spring, in hotbeds, and transplant to open ground when weather is suitable. For later crop, sow seed when weather becomes settled, in hills of 5 to 6 inches apart. They require a warm, rich soil, and should be watered liberally. Pkt. 10c; 1 oz. 25c; 4 oz. 75c; 1 lb. \$2.25.

Cubit. All-America Bronze Medal, 1944. Handsome, long, cylindrical fruits of dark green exterior, with crisp, white flesh and small seed area. Excellent for home and shipping.

Davis Perfect. (68 days.) A splendid dark green variety, excellent for slicing and a good shipper. Very dark green, white spined. The color is retained a long time when pickled. Tapered somewhat at both ends. Seeds few.

Improved Long Green. (67 days.) This is a great improvement over the old strain of Long Green. The fruits are unusually handsome, being of good form and of a deep green color which is retained a considerable time after picking. 9 to 10 inches.

Lemon. (65 days.) Little cucumbers resembling lemons in both form and color and have a delicious and distinctive flavor. Fine for preserves or sweet pickles and considered superb as a salad. Prolific.

National Pickling. (56 days.) A highly desirable pickling strain. Fruits weigh 1½ pounds; are dark green, symmetrical with thick walls; full ended. Slightly shorter than Chicago Pickling.

Straight 8 (66 days.) An outstanding new variety producing symmetrical, cylindrical fruits about 8 inches long and 1½ inches in diameter. Fruits are well rounded at the ends and when ripe are deep green and free from objectionable striping or tipping. Ideal for home or market gardens.

EGGPLANT

¼ oz. to 100 ft.. 5 to 6 oz. per acre.

Sow in mild heat, about the middle of March, and transplant on June 1, setting the plants 2½ feet apart. Pkt. 10c; oz 65c.

Black Beauty. (80 days.) The fruits of this variety are large and symmetrical. Retains its glossy black-purple coloring for a long time. This lasting quality makes it distinctly popular.

ENDIVE

1 oz. to 100 ft., 4 to 5 lbs. per acre.

Sow about the middle of April, in rows 1½ feet apart, and thin out to about 9 inches apart. Pkt. 10c; oz. 25c; 4 oz. 75c.

Broad-leaved (Escarolle). Leaves long, broad, and succulent. Fine for winter salads and cooking.

Large Green Curled (Pink Ribbed). Outer leaves bright green, midribs tinged with rose. Center leaves blanch readily. Makes attractive salads. Vigorous and resistant.

GARLIC

See Under Onions

KALE, Borecole

1 oz. to 100 ft., 4 to 5 lbs. per acre.

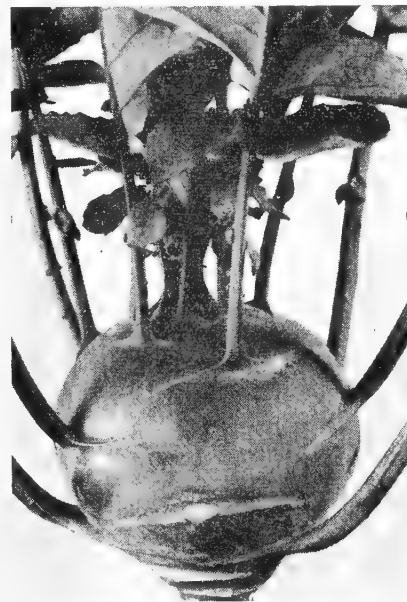
Culture same as late cabbage.

Pkt. 10c; 1 oz. 20c; ¼ lb. 60c.

Dwarf Green Curled Scotch. (55 days.) Plants have wide-spreading, finely curled blue green plume-like leaves. Relished as a vegetable green and useful as an ornament.

Tall Green Curled Scotch. (60 days.) Hardy plants with leaves deeply cut. Curled at the edges, light green in color; very tender and finely flavored after touched with frost.

Jersey or Thousand Headed. Called Chicken or Cow Kale. Vigorous branching plants with enormous cabbage-like leaves. Relished by poultry and livestock as winter greens.



KOHL RABI

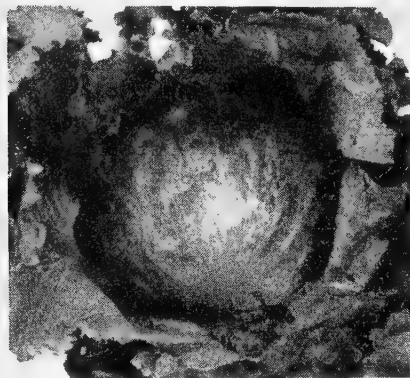
½ oz. to 100 ft., 4 to 5 lbs. per acre.

The delicious flavor of this turnip-shaped bulb combines both cabbage and turnip. As early in spring as possible, sow the seed in light rich soil in rows 1½ feet apart. When plants are well established, thin to 6 inches apart in the row.

Early White Vienna. (55 days.) For forcing. The best table sort if used when the bulbs are 2 inches in diameter. It matures very early and produces medium sized light green bulbs with white flesh of excellent quality. Pkt. 10c; 1 oz. 50c.

LEEK

Large American Flag. An early popular sort. Stems 8-10 inches long, 1½ inches thick; white, and attractive. Leaves large, medium green, drooping backward. Pkt. 10c; oz. \$1.00.



LETTUCE, N. Y. TYPE

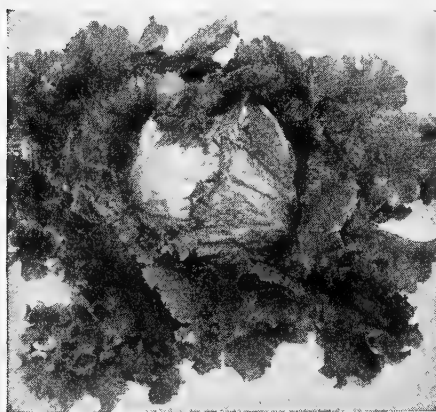
LETTUCE

½ oz. to 100 ft., 3 lbs. per acre.

Sow indoors in February and March. planting outdoors when weather is suitable.

Pkt. 10c; 1 oz. 40c; ¼ lb. \$1.20.

Great Lakes (83 days.) A heading variety of the Imperial type developed by U. S. Department of Agriculture and Michigan Experiment Station. Leaves large and well folded; ribs heavy. Shows considerable resistance to tipburn and ability to head under adverse conditions. Pkt. 15c; 1 oz. 50c.



GREAT LAKES LETTUCE

Improved Hanson. (82 days.) A very hardy lettuce, excellent for a summer crop as it withstands heat. Forms a large, light green head which is very hard. An excellent variety for the home gardener for it is very sweet, crisp and tender.

Imperial No. 152. (Mature in 83 days.) Medium large, solid and attractive heads. Well adapted for early fall planting and dependable in heading. Resistant to brown blight.

New York No. 515 Improved. A development from Number 12, matures slightly earlier. Resistance to tip-burn makes this lettuce ideal where hot weather prevails.

LEAF LETTUCE

Pkt. 10c; 1 oz. 30c; ¼ lb. 75c.

Black Seeded Simpson. (45 days.) A good non-heading or cutting lettuce with broad, light green, frilled outer leaves. Center leaves are almost white. Crisp leaves with a delicate flavor.

Grand Rapids. Very early. Hardy, disease resistant. The most widely used and best adapted variety for greenhouse forcing. Plants large, upright, compact, and handsome; bright solid, light green, large leaves with broad, much frilled margin. Very tender and sweet when grown under glass.

Oak Leaf. Shaped like an oak leaf. Stands up well in hot weather and does not turn bitter. Pkt. 15c; 1 oz. 50c.



OAK LEAF LETTUCE

Red Leaf Prize. An early non-heading sort, very desirable for home garden use. Plants of medium size, crisp and tender; color medium green with brownish-red edges on outer leaves.

MUSKMELON

1 oz. to 100 ft., 3 to 4 lbs. per acre.

Where summers are short sow in pots indoors, planting out in rich, well manured soil when danger of frost is over.

Pkt. 10c; 1 oz. 25c.

Cranshaw. (96 days.) A thick-fleshed melon with salmon color inside, golden green outside. Round at base, stem end pointed. Weighs 7 to 8 pounds.

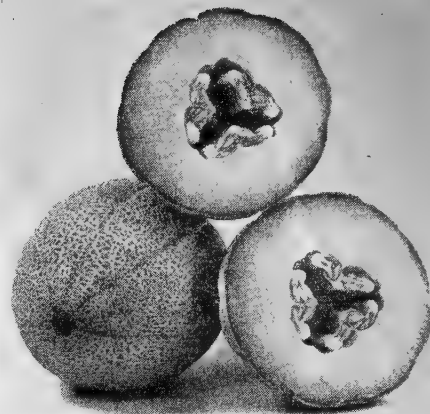
Hale's Best Improved No. 36. (80 days.) Fruits slightly oval, weight 3 to 4 pounds. Flesh exceptionally thick, deep salmon in color, sweet, aromatic and of very fine quality. Uniform in shape.

Hale's Best, Jumbo Strain. An outstanding shipping variety. Fruits slightly oval, uniform. Flesh exceptionally thick, deep salmon in color; sweet, and of very fine quality. Has a delightful aroma. Ripe in 75-80 days.

Hearts of Gold. (100 days.) This popular medium sized melon follows the earlier varieties. It is fine to plant for succession as it ripens in about 100 days. The fruits are 5 to 6 inches in diameter. The smooth orange salmon flesh is exceptionally thick and fine flavored.

Imperial No. 45. (87 days.) Extensively used because of resistance to downy mildew. Similar to Hale's Best but only faintly ribbed. An exceptionally good shipper.

Rocky Ford or Netted Gem. (92 days.) Fruits are small with rather large seed cavity, nearly round; no ribs, and heavily covered with hard gray netting. Flesh thick, green in color with gold tinge at the center. Juicy, spicy, and of good quality.



MUSKMELON

OTHER MELONS

Casaba. (110 days.) The casaba is a melon for the late season after the muskmelons are past. Fruits are medium, large, globe shaped, weigh 6 pounds; outer color golden yellow, surface wrinkled. Flesh white, luscious and spicy.

Honey Dew. (112 days.) A very fine melon. Fruits large globular, weigh 5 to 7 pounds. Surface is smooth, hard, with practically no netting, creamy white. Flesh light emerald green, thick, ripening to the rind; juicy and tender, with a distinct sweetness not found in other melons.

Persian. (115 days.) A late, slow growing variety. Fruits globular; rind very dark green, netting fine but sparse. Flesh thick, orange-pink in color. Of a distinct and delicious flavor.

MUSTARD

½ oz. to 100 ft., 4 lbs. per acre.

Make successive sowings in open from early spring to midsummer.

Pkt. 10c; 1 oz. 20c.

Southern Giant Curled. The leaves are large, light green with a tinge of yellow, and much crumpled and frilled at the edges. The plant is upright or slightly spreading in growth. This variety is valued in the South for its vigor, hardiness, and good quality.

Mustard Spinach or Tendergreen. Strictly speaking it is not a variety of mustard. A quick growing plant from the Orient. Leaves oblong, broad, fairly smooth with light green center ribs. Slow to seed, resistant to heat and drought. The flavor combines that of spinach and mustard.



MUSTARD, SOUTHERN CURLED

OKRA or GUMBO

2 oz. to 100 ft., 8 to 10 lbs. per acre.

Sow seed early in May, in rows 3 feet apart and 2 inches deep. As plants appear, thin out to about 1 foot apart. Pkt. 10c; 1 oz. 20c.

Improved Dwarf Green. Early. Short, thick pods.

Perkin's Mammoth Long Pod. Standard medium early sort for home, market garden and canning. Plants 4 to 5 feet tall; pods dark green, fleshy, tender; become 7 to 8 inches long, $1\frac{1}{2}$ inches in diameter. Distinctly ribbed and tapered.

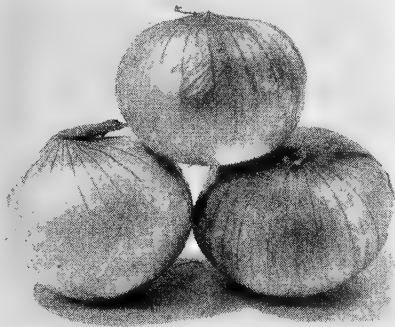
ONIONS

$\frac{1}{2}$ oz. to 100 ft., 3 to 4 lbs. per acre.

As early as soil can be worked in spring, sow the seeds thinly in drills 1 foot apart, and cover lightly, later thinning out to about 6 inches apart in the row. The soil must be well fertilized and be made very friable. In hot weather, water frequently. Pkt. 10c; 1 oz. 75c.

Crystal Wax Bermuda. Medium size, pure, waxy white. One of mildest sorts grown.

White Portugal, or Silverskin. A good second early white flat onion. It should be planted any time from November 1st until April 1st. It is a good keeper and desired for shipping.



ONION, YELLOW GLOBE DANVERS

White Bunching or Pickling. Excellent and one of the best for green onions. Crisp and mild, attaining a good size before bulbs form.

White Sweet Spanish. (112 days.) A very large onion with pure white flesh, similar to the Yellow Sweet Spanish. A good keeper. Globular with small neck.

Utah Sweet Spanish. A large, globe shaped brown onion, weighing 1 to 3 pounds. Small tops. Flesh mild and sweet. Good for slicing. Most popular marketing onion.

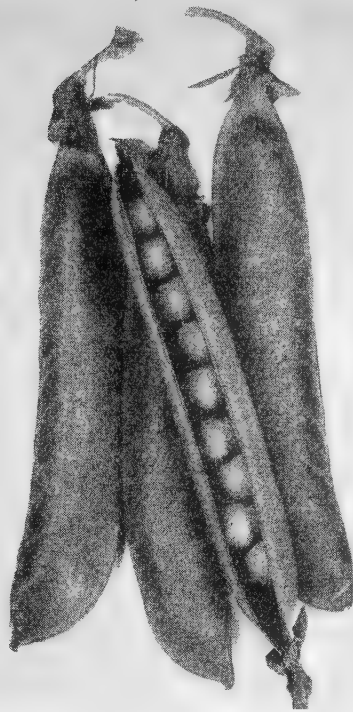
Yellow Globe Danvers. An outstanding variety. Dependable, medium late, hardy, and excellent keeper; used for shipping and storage. Bulbs medium size, spherical, clear yellow, firm and solid with tough, clinging skins. Flesh white.

ONION SETS

Sets are northern grown, hardy, carefully cleaned, graded and packed. Produced for western conditions. Plant onion sets deep for green onions and shallow for dry onions. 1 lb. to 50 ft.

GARLIC SETS

(In about 110 days.) Garlic is grown by planting the small bulbs in rows, 4 inches apart in the row. Cover the bulbs with one inch of soil. When the tops turn yellow, lift the bulbs and dry in the shade. To keep for the winter, hang in strings in a dry basement.



PEA, GRADUS

PARSLEY

$\frac{1}{2}$ oz. to 100 ft., 3 to 4 lbs. per acre.

Grows best in rich mellow soil and should be sown as early as possible in spring. Pkt. 10c; 1 oz. 20c.

Extra Triple Curled (Moss Curled). This vigorous compact grower is one of the most popular varieties because of its deep green color and tightly curled leaves that look like moss. It is unusually decorative.

PARSNIP

1 oz. to 100 ft., 3 to 4 lbs. per acre.

Sow in deeply worked, manured soil. Pkt. 10c; 1 oz. 25c.

Roots about 12 inches long with a well proportioned shoulder uniformly tapered to the tip. Very tender and good flavor.



PARSNIPS

PEAS

$1\frac{1}{2}$ lbs. to 100 ft., 90 to 180 lbs. per acre.

Prices: Pkt. 10c; $\frac{1}{2}$ lb. 25c; 1 lb. 45c.

FIRST EARLY VARIETIES

Alaska. (55 days.) This variety is extremely early. The round pods, $2\frac{1}{2}$ inches long, contain 5 to 8 peas which are ready for use in about 55 days. The peas are small, round, and tender. The vines are $2\frac{1}{2}$ to 3 feet tall.

Gradus. (55 to 62 days.) A very popular second early, large podded variety for home use and market. Vines 36 inches tall, medium green, stocky. Pods single, broad plump, pointed, medium green; contain 8 to 10 large, delicious peas. (Fz.)

Laxton's Progress. (60 days.) A little earlier than other dwarf large podded peas, this variety is generally considered the best of its class. The blue green pods are often more than 4 inches long and contain 8 dark green peas of finest quality. The seeds are large, wrinkled green and cream. (Fz.)

Little Marvel. (64 days.) Outstanding among dwarf peas for the exceptional quality and yield. Valuable for home garden and early market. Vines dark green, 18 inches tall, stocky. Pods single and double, dark green, blunt, plump, well filled with 7 to 8 tender peas.

MAIN CROP

Mature to pick in about 75 days.

✓ **Tall Telephone or Alderman.** A handsome, large podded variety. Unexcelled for home gardens, for local markets and for shipping. Bears immense crops. Wilt resistant. Pods single, very broad, plump, straight, dark green, pointed, contain 8 to 10 peas of highest quality. (Fz.)

✓ **Dwarf Telephone.** Only about 2 feet tall, otherwise resembling Alderman. The pods are well filled with peas of the same good quality. It is an excellent variety to follow the early peas in the home garden. Seeds large, green, wrinkled.

Thomas Laxton (62 days). Excellent all-purpose variety. Plant deep green and medium heavy. The single, deep green plump pods contain 7-8 large, tender peas of high quality. Seeds of medium size, cream and green.

PEPPER

$\frac{1}{4}$ oz. to 100 ft., 1 to 2 lbs. per acre.

Culture, soil and temperature requirements are about the same as for eggplant. A moderate dressing of Guano, poultry manure, or complete commercial fertilizer, hoed into the soil after the plants are 6 to 8 inches tall, will be very beneficial. Pkt. 10c; 1 oz. 75c.

California Wonder. Thickness of flesh alone, which is often $\frac{3}{4}$ of an inch, places this sweet pepper above all others. It is crisp and juicy, too, without a trace of pungency. Vigorous growing plants bear a heavy yield of blocky fruits that become as much as 5 inches long and 4 inches wide.

Long Red Cayenne. This well known, medium early pepper is especially good for drying purposes. The fruit is 4 inches long and 1 inch thick, twisted and pointed. It is deep green when young and bright red when ripe. The flesh is strong and pungent.

Perfection Pimento. A splendid canning variety, adapted to home and market garden culture. Plants large, erect, prolific. Fruits heart shaped, very smooth; flesh exceptionally thick, sweet and mild.

PUMPKIN

4 oz. to 100 ft., 3 to 4 lbs. per acre.

Pumpkins are typically American, and pumpkin pie is one of our truly American dishes. They are less sensitive to unfavorable conditions of soil and weather than melons or cucumbers, but they are cultivated in about the same way. Pkt. 10c; 1 oz. 25c.

Kentucky Field or Dickenson. Fruits very large, flattened, furrowed. Skin creamy buff; flesh extremely thick, deep salmon-yellow and of good quality. Dependably early and heavily productive. Good for canning. Squash bug resistant.

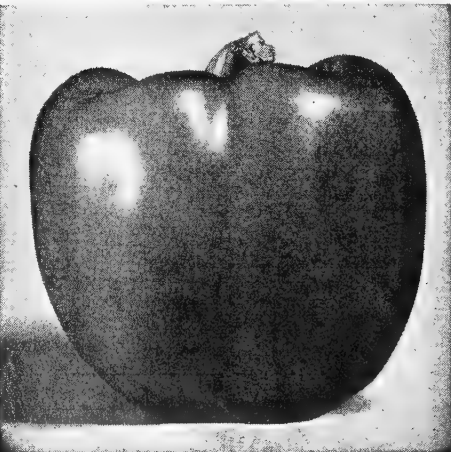


PUMPKIN, HALLOWE'EN

Large Yellow or Connecticut Field. This sort is grown largely in the corn field for stock, but the flesh is moderately fine grained, highly flavored, and very good for pies. The fruits weigh about 20 pounds and are a deep orange yellow.

Sugar or New England Pie. The earliest and best variety for pies. Fruits commonly 6 inches long and 8 to 9 inches in diameter; flattened, furrowed. Skin smooth, of a rich, reddish-orange color; rind hard. Flesh is thick and orange yellow.

Winter Luxury. This variety is very popular for the home garden. The fruit matures in 75 to 80 days, weighs 8½ pounds, and is nearly round. The skin is light yellow with a russet tinge and finely netted; the flesh is rich creamy yellow, thick, sweet, and finely flavored.



PEPPER, CALIFORNIA WONDER



EARLY SCARLET GLOBE

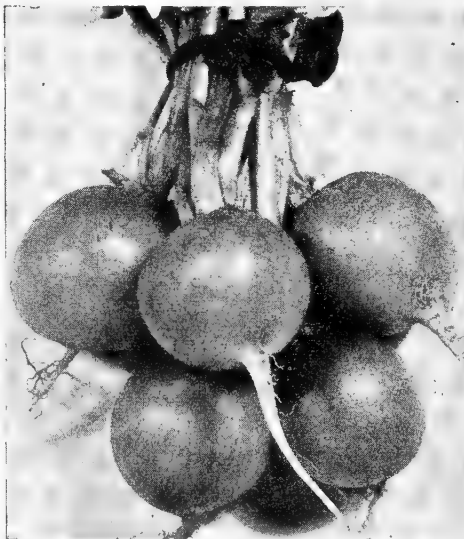
RADISH

1 oz. to 100 ft., 10 to 12 lbs. per acre.

For an early crop, sow in hotbed in January, February and March. As soon as ground is fit to be worked, sow seed in the open, in rows 1 foot apart. Pkt. 10c; 1 oz. 20c; 4 oz. 50c.

Crimson Giant. A favorite with home gardeners. Large globular root, 1 to 1½ inches in diameter, crimson, flesh firm.

Early Scarlet Globe. The earliest of all forcing radishes grown for market. Globular, uniform size, bright scarlet, white flesh, crisp and tender.



RADISH

French Breakfast. A splendid variety for home use; oblong, bright scarlet, white tip. Grows about 1½ inches long and ¾ inch thick.

Long White Icicle. Long slender roots which remain tender and crisp until mature. The small top permits close planting. Early.

Sparkler. 25 days. An early variety of a superior strain of the old Scarlet Turnip white tipped. 1¼ inch in diameter with bright scarlet top, a clear white base and small slender roots, this radish is excellent for the home garden or growing for market.

WINTER VARIETIES

Black Spanish Long or Round. A hardy, large, rather pungent variety for winter use. Keeps unusually well; is 8 to 9 inches long and 2 inches thick, slightly tapered. The skin is black and the flesh white and crisp. Round, about 4 inches in diameter.

Chinese White Winter (Celestial). Clear white and smooth; about 8 inches long, 2½ to 3 inches in diameter. Square shoulder and blunt bottom. Flesh white, firm, and crisp; mild; not as pungent as most winter varieties.

Scarlet China Winter (Chinese Rose Winter). A large rose-colored variety from the Orient. Hardy and rather mild. The flesh is white, and very crisp. This variety is broadest at its base and is 4 to 5 inches long.

RUTABAGA

1 oz. to 100 ft., 2 to 4 lbs. per acre.

The culture is the same as for turnip, but if anything, less exacting in care. Pkt. 10c; 1 oz. 20c; ¼ lb. 75c.

Purple Top. Medium top and very small neck. Roots are large, flattened globe in shape, yellow with purple top. Flesh is yellow, firm and of excellent quality.

SALSIFY, Vegetable Oyster

1½ oz. to 100 ft., 7 to 8 lbs. per acre.

Sow in deeply worked, well manured soil avoiding coarse and fresh manure. Pkt. 10c; 1 oz. 50c.

Mammoth Sandwich Island. Large and strong growing with long, smooth, white, tapering roots. Less likely to branch than those of other sorts.

SPINACH

1½ oz. to 100 feet, 10 to 20 lbs. per acre.

Sow early in the open.

Pkt. 10c; 1 oz. 20c.

Bloomsdale Improved Thick Leaf. The seed of this thick leaved variety produced the largest spinach. Growth is rapid and the leaves remain in good condition a long time. The medium green leaves are large, rounded, slightly crumpled, succulent, and tender. (Fz.)

Nobel, or Giant Thick Leaved (All-American). Of rapid growth. The leaves are the largest of any type and keep well after picking; medium-green, rounded, slightly crumpled, succulent and tender. Excellent for the home garden.

New Zealand. Not true spinach though similar when cooked. Thrives in hot, dry weather. The large, spreading plants have small, thick, pointed, deep green leaves, which can be picked repeatedly throughout the season.



SPINACH

SQUASH

Vining, 1 oz. to 100 feet, 4 lbs. per acre.
Bush, 1 oz. to 100 ft., 4 to 6 lbs. per acre.

Seeds should be planted about the middle of May, in hills 4 feet apart for bush varieties, and 10 feet apart for the running sorts. Put 5 to 8 seeds in each hill; afterwards thin out, leaving 3 or 4 of the best plants. Pkt. 10c; 1 oz. 25c; 4 oz. 75c; 1 lb. \$2.00.

Banana. A late trailing sort, cylindrical and pointed at blossom end. A fine squash for pies. Free from fiber or stringiness. Flesh thick, deep yellow, dry, and of a sweet flavor. Has slate-grey rind.

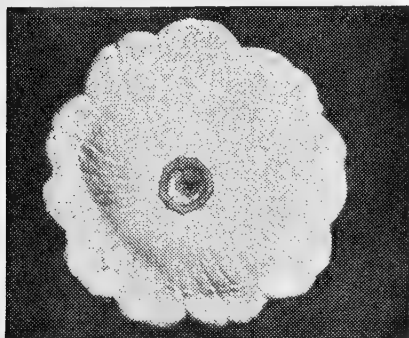
Early Prolific Straightneck. The peak of perfection in a summer squash. Fruits straight and smooth, of a delicate creamy color. Vines produce abundantly, 50 days.

Early Summer Crookneck. Very early, 60 to 65 days. The bushy plant is very productive. Fruits attractive, weighing about 2 pounds. The skin is distinctly warted and bears a bright yellow color, while the flesh is pale cream, firm, and tender. A very good sort for home planting.

Improved Hubbard. Large and of warty Hubbard type. Shell dark green, hard, moderately warted. Flesh light orange, very dry and richly flavored. One of the best winter squashes.

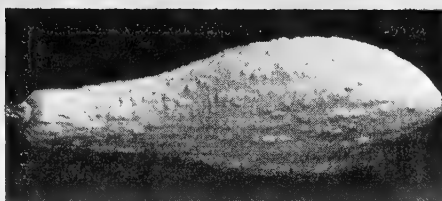


Table Queen or Danish. Small, dark green, acorn shape. Flesh deep yellow, dry, richly flavored. Medium early. A good keeper. Easy to grow. Delicious when served baked whole. Before serving cut open and remove seeds.



WHITE BUSH SCALLOP

White Bush Scallop. A popular variety bearing profusely. Small, rather flat, white squashes with a distinct scalloped edge. Is very early and has a fine flavor.



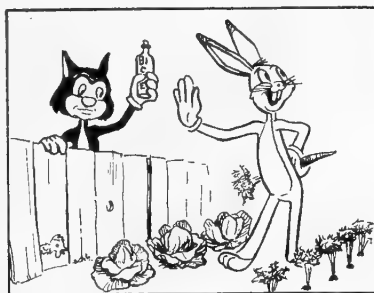
SQUASH, SUMMER STRAIGHTNECK

Zucchini or Italian. The favorite Italian squash. It should be eaten when quite young, 4 to 6 inches long. It is a delicious summer variety; very prolific, a few hills will suffice to keep the family well supplied the entire summer. (Fz.)



BLACK ZUCCHINI

Grow Your Own Vitamins



Garden fresh vegetables are the richest, surest source of health-giving, health-preserving vitamins. Insure your family's health by raising these easy-to-grow vegetables:

Beans: Vitamins A, B, C, G.

Beets: Vitamins C, G; greens: Vitamins A, G.

Carrots: Vitamins A, B, C, G.

Corn: Vitamins A, B, C, G.

Cucumbers: Vitamins A, B, C.

Lettuce: Vitamins A, B, C, G, E.

Muskmelon: Vitamin C.

Onions: Vitamins B, C, G.

Parsley: Vitamin C.

Squash: Vitamins A, B.

Tomatoes: Vitamins A, B, C.

Turnips: Vitamin C; greens: Vitamins A, B, C, G.

SWISS CHARD

1 oz. to 100 ft., 6 to 10 lbs. per acre.

The tops are used like spinach. Culture like beets. Thin to 8 inches.

Pkt. 10c; 1 oz. 25c.

Lucullus, Dark Green. The fleshy crumpled leaves of this variety make very choice greens. Plant erect; stalks rounded and finely ribbed. Foliage a rich deep green. (Fz.)

Rhubarb Chard. A Swiss Chard that looks like Rhubarb. The leaf stalks are bright but delicate, translucent crimson; the rich color extends out through the veins into the dark green, heavily crumpled leaves. Different, tasty, delicious flavor. Easily grown, thrives everywhere.



RHUBARB CHARD

TOMATO

1/8 oz. to 100 ft., 2 oz. per acre.

In February or March sow seeds lightly in rows in greenhouse, hotbed, or window box, and when plants have reached a height of 3 inches, transplant in hotbeds. About June 1, set out in open ground, 4 feet apart, giving plenty of well rotted manure to each plant. Water freely during hot weather. To obtain the best results, trellises or stakes should be used. Pkt. 10c; 1 oz. 70c; 4 oz. \$2.00.

Bonny Best. One of the very best early varieties (75 days) for table and canning. Vine medium, not very hardy. Fruits medium sized, apple shaped, smooth; solid, bright scarlet in color, of excellent quality.

Earliana Improved. (65 days.) One of the earliest scarlet fruited varieties. Medium size, almost seedless and solid. Vine open and spreading. A heavy bearer. Succeeds everywhere.

Jubilee. (72 days.) Tomato of real merit; it is different from any other tomato of its class. Fruits are bright orange-yellow, globular and weigh about 6 ounces.

Marglobe. (73 days.) Excellent home garden variety and particularly valuable for shipping. Plants thrifty and heavily productive with a long bearing period. Fruits uniform deep scarlet; large; uniformly globe shaped; smooth, solid, and of distinct quality.

Pearson, Improved. (76 days.) Primarily for canning but also of value as a shipper. Vigorous self-topping plants with ample foliage to protect the heavy set of fruits, which are medium large, semi-globe and of good red color.

Pritchard (Scarlet Topper). (70 days.) Wilt resistant and self-topping or self-pruning. Mid-season to late; prolific. Fruits globe-shaped, deep scarlet, smooth and solid. A good home and market variety and very popular for shipping.

Rutgers. (86 days.) A non-acid and disease resistant introduction which has deservedly achieved general popularity. Primarily intended for canning. It has also proved a good green-wrap shipper and all-purpose variety. Plant large with thick stems and vigorous foliage. Fruits globular, bright red, with thick walls and small seed cells.

TOMATOES—Continued

Scarlet Dawn. (70 days.) Fruits medium large, globular, smooth, free from flat side. Attractive bright scarlet color; uniform. Plant of medium growth, fairly open, early and prolific.

Stokesdale. (73 days.) Produces heavy crops. Almost free of stem-end crack. Slightly earlier and larger than Marglobe.

Victor. The highly publicized new tomato introduced by the Michigan State College. Fruits are about 3 inches in diameter, globe-shaped and ripen to a deep scarlet. Early.

Yellow Pear. (73 days.) Enormously productive, fine for salads or marmalade. Sweet and delicious. Small, yellow, pear-shaped fruits of exceedingly mild and pleasing flavor. Pkt. 10c; 1 oz. \$1.00.

Red Plum. (73 days.) Oval plum-shaped fruits, 2 inches long. A clear red. Used for preserves. Pkt. 10c; 1 oz. \$1.00.

Ground Cherry or Husk Tomato. Fruits small, yellow, enclosed in loose paper husks. Very much prized for preserving. Pkt. 10c; 1 oz. \$1.00.



TOMATO, RUTGERS 86

TURNIP

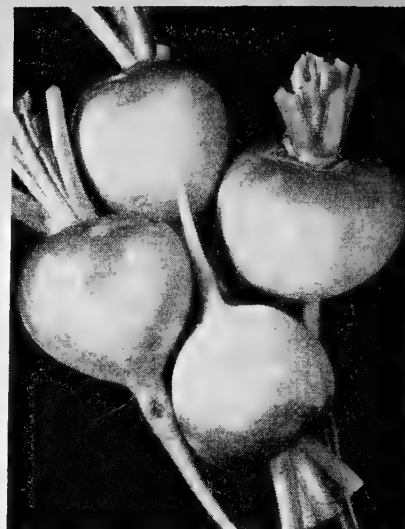
1 oz. to 100 feet, 2 to 3 lbs. per acre.

For the main crop, sow in open ground from May to July; for winter use, during July and August. Set out in rows 1½ feet apart, allowing a space of 6 inches between the plants. Pkt. 10c; 1 oz. 20c; ¼ lb. 75c.

Golden Ball or Orange Jelly. A splendid variety for table use; of excellent flavor. Tops small, cut leaved. Roots globular, commonly 4 inches in diameter. Skin smooth, orange-yellow; flesh yellow, firm, fine grained and of good quality. Rapid grower. Plant during cooler months only. Table size in 60 days.

Purple Top Strap Leaf. A medium early, very productive variety. Tops medium small, upright, strap-leaved. Roots flat, purple red at the top, white below; flesh white, fine grained and tender.

Purple Top White Globe. This variety may be grown to quite a large size without developing signs of coarseness. It is of spherical shape with white skin, the upper one-third being colored reddish purple. Flesh pure white, firm, fine grained and of superior flavor. Good keeper. Fine for table use and stock feeding. Table size in 55 days, mature in 70 days.



TURNIP, PURPLE TOP

Purple Top Yellow Aberdeen. Full size in about 80 days. Of high quality. One of the best keepers. Globular or slightly flattened, usually about 5 inches in diameter, smooth, upper part purplish-red, lower part pale yellow as is the crisp, firm, sweet and tender flesh.

Snowball. A desirable sort for home use and early markets. Tops small and erect. Roots medium sized, round, white throughout, sweet, crisp and tender. Table size in 40 days.

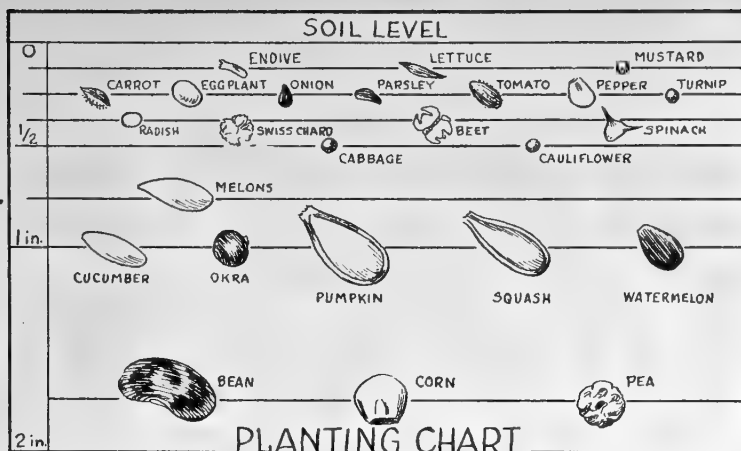
Ever Try a Cover Crop?

Some portions of your vegetable garden will probably be unused during part of the year. It's a good idea to sow a quick growing cover-crop such as a combination of winter oats and vetch, or winter oats and rye, in these idle spaces. When planting time arrives turn your cover crop under to obtain the benefits of the humus and plant food stored in the green plants. If you have never tried cover cropping you'll be surprised at the results. Even stiff clay soils are noticeably improved by the use of a cover crop.

QUANTITY OF SEED AND SPACING FOR HOME AND MARKET GARDENS

VEGETABLE	Seed Required for 50 ft. of row	Seed Required to sow an acre	Distance between rows	Distance apart in row	Depth of planting in inches	VEGETABLE	Seed Required for 50 ft. of row	Seed Required to sow an acre	Distance between rows	Distance apart in row	Depth of planting in inches
Artichoke, Globe	¼ oz.	6 to 8 oz.	40 to 48	18 to 24	1	Kohl Rabi	¼ oz.	4 to 5 lbs.	14 to 24	4 to 6	1½
Asparagus	½ oz.	4 lbs.	14 to 24	3 to 6	1	Leek	¼ oz.	4 lbs.	14 to 36	2 to 3	¾
Beans, Bush	½ lb.	50 to 60 lbs.	24 to 30	2 to 3	1½ to 2	Lettuce	¼ oz.	3 lbs.	12 to 18	4 to 12	¾
Beans, Lima	½ lb.	30 to 50 lbs.	24 to 36	3 to 6	1½ to 2	Melon, Musk	½ oz.	3 to 4 lbs.	70 to 80	36 to 60	¾
Beans, Pole	½ lb.	30 to 35 lbs.	36 to 48	6 to 8	1½ to 2	Melon, Water	½ oz.	3 to 4 lbs.	72 to 96	72 to 96	¾
Beet	½ oz.	8 to 14 lbs.	14 to 24	3 to 4	½ to 1	Mustard	¼ oz.	4 lbs.	14 to 24	6 to 9	½
Beet, Mangel & Sugar	½ oz.	6 to 10 lbs.	18 to 24	6 to 9	½ to 1	Okra	1 oz.	8 to 10 lbs.	24 to 40	18 to 24	1
Swiss Chard	½ oz.	6 to 10 lbs.	18 to 24	10 to 12	1	Onion	½ oz.	3 to 4 lbs.	18 to 24	3 to 4	¾
Broccoli	¼ oz.	4 oz.	20 to 36	16 to 22	½ to 1	Onion (for sets)	½ oz.	60 to 85 lbs.	12 to 14	Not thin'd	¾
Brussels Sprouts	¼ oz.	4 oz.	20 to 36	16 to 22	½ to ¾	Parsnip	½ oz.	3 to 4 lbs.	18 to 24	3 to 4	¾
Cabbage	¼ oz.	4 oz.	18 to 36	14 to 24	½	Parsley	¼ oz.	3 to 4 lbs.	12 to 20	6 to 8	½
Cardoon	½ oz.	5 oz.	20 to 32	20 to 30	½ to 1	Peas	¾ lb.	90 to 180 lbs.	24 to 36	1 to 2	1 to 2
Carrot	¼ oz.	3 to 4 lbs.	16 to 24	1 to 3	½	Pepper	½ oz.	1 to 2 lbs.	20 to 30	18 to 29	½
Cauliflower	¼ oz.	4 oz.	24 to 30	20 to 24	½	Potatoes	8 lbs.	800-1000	24 to 36	18 to 24	6
Celery	¼ oz.	4 oz.	24 to 30	4 to 6	¾	Pumpkin	2 oz.	3 to 4 lbs.	96 to 110	60 to 84	¾
Chicory	½ oz.	4 to 5 lbs.	20 to 36	2 to 3	½ to 1	Radish	½ oz.	10 to 12 lbs.	12 to 18	1 to 2	½
Collard	¼ oz.	5 oz.	24 to 30	14 to 18	½	Rhubarb	½ oz.	3 lbs.	24 to 42	20 to 24	¾
Corn, Pop	3 oz.	6 to 8 lbs.	34 to 40	6 to 8	1	Rutabaga	½ oz.	2 to 4 lbs.	18 to 24	4 to 7	¾
Corn, Sweet	4 oz.	10 to 12 lbs.	30 to 42	9 to 12	1	Sage	½ oz.	4 to 5 lbs.	20 to 24	6 to 10	¾
Corn Salad	2 oz.	10 to 12 lbs.	14 to 18	3 to 4	¾	Salsify	¾ oz.	7 to 8 lbs.	18 to 24	2 to 3	¾
Cress	1 oz.	10 lbs.	12 to 18	2 to 4	½	Sorrel	½ oz.	4 to 5 lbs.	18 to 22	2 to 3	¾
Cucumber	½ oz.	3 to 4 lbs.	48 to 60	12 to 36	½ to ¾	Spinach	¾ oz.	10 to 20 lbs.	14 to 18	3 to 5	¾
Dandelion	¼ oz.	5 to 6 lbs.	18 to 22	6 to 10	½	Squash, Bush	1 oz.	4 to 6 lbs.	42 to 48	42 to 48	1
Dill	½ oz.	5 lbs.	20 to 36	4 to 6	¾	Squash, Vining	1 oz.	4 lbs.	72 to 90	60 to 90	1
Egg Plant	½ oz.	5 to 6 oz.	24 to 36	18 to 24	¾	Sunflower	1 oz.	7 to 8 lbs.	48 to 70	10 to 12	1
Endive	½ oz.	4 to 5 lbs.	18 to 24	8 to 12	¾	Tomato	2 oz.	40 to 60	36 to 40	¾	¾
Fennel	½ oz.	3 to 4 lbs.	24 to 32	5 to 8	¾	Tobacco	2 oz.	36 to 48	24 to 36	¾	¾
Kale	½ oz.	4 to 5 lbs.	24 to 32	14 to 22	½	Turnip	½ oz.	2 to 3 lbs.	12 to 20	2 to 4	½

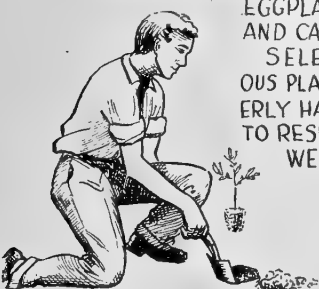
WORK DOWN THE TOP SOIL WITH A RAKE UNTIL IT IS LEVEL, FINE AND IN PERFECT PHYSICAL CONDITION.



THE BEST METHOD TO SOW SEED IS TO RUB A PINCH OF SEED BETWEEN THE FINGERS.

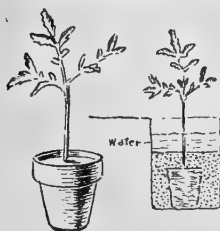


WALK ON A BOARD WHEN SOWING SEED. WITH A POINTED STICK MAKE A V-SHAPED GROOVE FOR SEED.



PLANTS ARE SAFER AND EASIER TO USE FOR TOMATO, PEPPER, CAULIFLOWER, EGGPLANT, CELERY AND CABBAGE. SELECT VIGOROUS PLANTS, PROPERLY HARDENED TO RESIST COOL WEATHER.

SETTING PLANTS



LEAVE AS MUCH OF THE ORIGINAL SOIL ON THE ROOTS OF THE PLANTS AS POSSIBLE.

WATERING IS IMPORTANT
WATERING SHOULD BE DONE IN THE EARLY MORNING.



WHAT TO PLANT

We have the highest quality seed available, both in flower and vegetable seed.

In selecting vegetables to plant include the ones your family should eat as well as the kinds they like. A well balanced diet is most important and should include green vegetables, yellow vegetables, leafy vegetables, root vegetables, and tomatoes.

HOW TO PLANT

Sow seeds at the right time indicated in the cultural directions of the catalog as well as on the seed packets. First, work down the top soil with a rake until it is level, fine and in perfect condition, before attempting to plant seed.

Seed should be sown thinly in shallow rills, made with a stick as shown in the sketch. To make the rows straight, follow a line of string stretched between stakes placed at both ends of the row. The depth of this rill depends on the variety sown. Check with the depth of planting chart above before sowing.

Seed may be sown directly from the packet, or by rubbing a pinch of seed between the thumb and index finger. This latter method gives a thinner distribution of the seed. Small seeds should not be thicker than 10 to the inch. Sow one row at a time and after each row, cover the seed lightly, touching the loose soil with a rake. Place the board used for walking between the rows on top of the sown seed and walk across it to firm the soil for better germination.

Treatment of the seed with "Cupro-cide" will eliminate a great deal of damping off, and rotting of the seed after sowing, especially if sown during the wet weather.

If the soil is moist, but not wet, at the time of sowing, watering will not be necessary before the seedlings are up. If it dries out, however, sprinkle carefully so as not to wash out the small seedlings.

WATERING IS IMPORTANT

Watering will be necessary during the growing season. It should be done early in the day. Water generously, soaking the soil deeply each time, rather than by quick "sprinkles" with the hose. In this way, the roots will grow deep, feed better and be protected from drought, in case watering is missed during a hot dry spell. Once every week or 10 days should be ample for most soils. Observation of the soil, and testing with a shovel, will best determine when to water.

FEED YOUR GARDEN

If Your Garden Is to Feed You

Fertilizers are very important. The food value of garden vegetables for human consumption depends greatly on their mineral content, derived from the soil. The vitamin content depends on the vigor of growth and the abundance of sunlight. Therefore, the fertilizing of the soil is important to insure vigorous growth and healthy mineral and vitamin-rich vegetables. A good practice is to spade commercial fertilizer, balanced to supply the necessary proportions of nitrogen, phosphorous and potash into the soil before planting, in addition to the humus (manure, peat, compost, etc.) and phosphate and other fertilizers put into the soil at the time of preparation. They are deeper down and can be reached by the plants as they grow. Later in the season, when the seedlings are established, applications of fertilizers in small doses, as side dressers, keep vegetables in active growth. Ask us for special fertilizer formulas for vegetable gardens.

MULCHING—

A Sound Garden Practice

A good mulch, properly applied, will reduce the loss of water through the surface of the soil and keep down weeds. This results in less labor and expense in watering and cultivating. Another benefit of mulching is greater cleanliness, as it prevents the spattering of mud over the blossoms and fruits of low growing plants.

Various materials can be used for the mulch. Well rotted cow manure is highly satisfactory, especially if it is free from weed seeds. Dried lawn clippings applied in thin layers over a period of time, straw, dry leaves, chaff, sawdust, peat moss, vermiculite, hulls are all suitable materials.

Mulch should be applied when the soil is in good tilth and moderately moist.

SPRAY AND DUST FOR PESTS

Insects and diseases may infest the vegetable garden but will never become a serious problem if one watches for evidence of damage and takes prompt action. Sprays and dusts are available in convenient packages to combat every garden pest. When spraying cover all parts of the plant and both sides of the leaves. Do a thorough job promptly and avoid a serious infestation.

WHAT MAKES FOR SUCCESS?

Success in gardening starts by following certain rules. Whether these be noted from the pages of books or gathered from practical experience makes little difference. The process is the same. Good seed, soil, water, fertilizer, and work makes for success.

Knox is Headquarters for LADINO CLOVER AND PASTURE GRASSES



Thousands of Acres of Ladino Have Been Planted

Advantages of Ladino Clover

Ladino Clover is an ideal dairy pasture crop just as alfalfa is an ideal dairy hay crop. It will grow very satisfactorily on land that is not good for alfalfa. By that I mean it is an ideal crop to raise on shallow soil, on soil where there is a high water level or where alkali is present.

It continues to flourish even when pastured at the rate of four cows per acre during the growing season.

The Plant

The Ladino Clover plant is very similar in appearance to ordinary White Dutch clover, but it grows more rapidly and becomes much larger. Its roots are comparatively shallow. They branch at the crown, just above the ground, and send out runners in all directions for 3 or 4 feet. These runners branch and take root, every few inches, at the nodes.

The stems, which lie close to the ground, are held by the many roots and will not be pulled off or eaten by stock while pasturing. The ends of the stems, which grow as high as 2 feet, are not injured by pasturing or cutting.

When to Plant Ladino

Seemingly the best months for seeding Ladino are August, September, October, November, February, March, April and May. Land should be prepared the same as for alfalfa seed. Deep plowing is not necessary. If the land has been in beans or any other cultivated crop, it may be simply disced and harrowed, so that a shallow seed bed will be made. You need sow only 4 to 6 pounds of seed to the acre. This makes Ladino a very economical crop to plant.

Irrigating Ladino

Although Ladino is not a particularly dry or "thirsty" plant, but is rather a hardy "rustler" capable of standing the hardest pasturage, it is necessary to keep the soil moist in order to get a satisfactory stand. This is especially true in soil containing alkali, which must be kept well watered.

Lb. \$2.60. Write for quantity prices.

Suggested Grass Mixture With Ladino

A number of dairymen have reported very good results from planting Ladino with other grass seeds. Such a mixture reduces the possibility of bloat. They have found the following mixture very satisfactory: Ladino Clover, 3 lbs.; Perennial or Domestic Rye, 6 lbs.; Orchard Grass, 1 lb.; Meadow Fescue, 2 lbs.

Redtop Grass. A perennial and a native of this country, redtop grass (*Agrostis alba*) has a creeping habit of growth which makes a coarse, loose turf. While it is a wet-land type of grass, it will withstand considerable drought. It is primarily adapted to mountain meadows and pastures but may have a place as a sod-former in seepage areas where it will furnish late feed. Its normal maturity dates are similar to those of timothy. Per lb. \$1.10.

Timothy. A perennial, timothy (*Phleum pratense*) is a native of Europe and thus, like redtop grass, a northern species. It is frequently used as a hay and pasture plant in areas of cold winter and moderate summer temperatures. But it has never been durable when used in a mixed pasture in the lower elevations of this state. Per lb. 50c.

Hubam Clover (*Melilotus Alba*, annual). Annual sweet blossom clover similar to White Blossom Sweet Clover. Per lb. 55c.

White Blossom Sweet Clover (*Melilotus Alba*). Hardy biennial, strong grower, attaining a height of from three to six feet. Not too well relished by stock. Must be kept fed down to prevent its becoming too coarse. Large strong tap root; excellent for cover crop. Per lb. 55c.

Yellow Blossom Sweet Clover (*Melilotus Officinalis*). Similar to White Blossom Sweet Clover, but growing shorter and leafier, and having yellow blossoms. Per lb. 55c.

Red Clover (*Trifolium Pratense*). Adapted to only the coastal and higher elevations of California and Nevada. A short-lived perennial producing excellent quality hay or forage. Relished by all stock. Ladino is much more satisfactory for the central valleys of California. Per lb. 90c.

Crested Wheat Grass (*Agropyrum cristatum*). Perennial grass with characteristics similar to Bromegrass. Will withstand cold and drought. Per lb. \$1.10.

Reed Canary Grass (*Phalaris arundinaceae*). Coarse, tall-growing perennial making a large bunch plant with leafy stems. Spreads underground by creeping root stalks; does well in swampy ground and produces good quality feed, but should not be pastured too closely continuously. Per lb. \$1.00.

Buffalo (Mesquite) Grass (*Buchloe dactyloides*). One of the most nutritious and fattening grasses for pasture and range from Texas north to Canada, readily grazed by all classes of livestock from late spring to late winter. Grows best on tight clay and clay loam soils. Turf thick and perennial; plants spreading by means of many surface runners radiating in all directions; leaves fine and abundant. Becomes dormant during drought and in winter. Grows with Bermuda in drier soils, where it is also valuable as a lawn grass. Seeds are borne in small burs on short seed stems among the leaves. While most nutritious in the cool moist to cool dry periods of spring and fall, it cures on the ground and retains some of its feed value during periods of drought and in winter.

White Dutch (*Trifolium repens*). The most popular clover for lawn grass mixtures. Grows best in the cool moist periods of the fall and spring, flourishing on well-drained, moist soils high in lime content. It adds forage value when sown with such grasses as Dallis, Carpet, Bermuda, and Kentucky bluegrass. Plants perennial, 3-12 inches; stems fine, numerous, leafy, creeping, soft and succulent; developing roots at all joints. Seeds very small, yellow to red, heart shaped. Per lb. \$1.55.

Burnet (*Poterium Sanguisorba*) is neither a grass nor a clover. It is a long-lived hardy, tender, palatable herb, very leafy, growing from a hardy tap root. It grows to a height of about two feet under favorable conditions. It grows well on many types of soil including light sandy loam, staying green the year round. It apparently has no temperature limits, and when planted on permeable soil is able to withstand low rainfall and long dry summers as well as to stay green under the snow in winter. It is relished by all livestock when used in well balanced mixtures, but when planted alone the stock become very tired of it as it has a taste all of its own. Burnet does not cause bloat. Per lb. \$1.00.



Alsike Clover. A perennial and a native of Scandinavia, alsike clover (*Trifolium hybridum*) has a place in irrigated pastures chiefly in the northern end of the state (Lassen, Modoc, Siskiyou, and eastern Shasta counties). On some sites farther south (notably the northern Sacramento Valley), it is incorporated in the mixture for heavy soils and sites where seepage or irrigation water concentrate to such an extent as to be intolerable for Ladino clover. It is primarily adapted to wet, cold, and sour soils of heavy texture. **Lb. 85c.**

Bur Clover. An annual and native of the Mediterranean region. Bur clover (*Medicago hispida*) has long been a common and valued inhabitant of all but the colder portions of California. It does not need to be seeded except in those fields where the natural stands have been eliminated or greatly reduced by close pasturing or previous farming practices. Being a winter annual, it is dependent entirely upon seed for reproduction. North of San Francisco it is not popular in irrigated pastures because it is there semi-dormant in the winter and starts in the spring very little earlier than Ladino clover. In the southern part of the state, however, it grows well all winter and thus fills the need for a legume to extend the pasture season. **Per lb. 90c.**

Subterranean Clover. An annual, subterranean clover (*Trifolium subterraneum*) is a native of Europe, Asia, and Africa. The climatic tolerances of this legume are similar to those of bur clover. It is a prostrate, soft woolly plant, all parts of which are covered with fairly long, soft hair. The three leaflets forming each leaf are carried on a long stalk and each leaflet is heart-shaped and faintly toothed at the summit. After flowering, the stalks which carry the flower heads turn downward and grow until the seed head is pushed below the surface of the soil. Although an annual, this habit of burying its own seed renders this plant equivalent to a perennial. Its season of growth is similar to that of bur clover and its place in the pasture would therefore be similar. Perhaps its chief advantage is that it will do well in really acid soils if there is sufficient available phosphorus. The general use of this clover is not now recommended. It is mentioned here chiefly because it has come into prominence recently and has already been found adapted to a considerable part of the state. A few test plantings of it in districts where bur clover is recommended, or in some acid or granite soils where bur clover does not thrive, might well be made in order to develop facts as to its real place in irrigated pasture practice. **Per lb. \$1.20.**

Strawberry Clover. A perennial and a native of eastern Mediterranean countries and southern Asia Minor, strawberry clover (*Trifolium fragiferum*) is a low-growing plant that spreads by creeping stems that root at the nodes. The flower heads are round and pinkish to white in color, resembling an immature strawberry. This clover seems to have found a place in some northern areas of the state (particularly in the Tule Lake basin and on the coastal plains of Humboldt County). Its chief use elsewhere is on soils that are too saline to produce Ladino. While with ample irrigation, it has survived on such sites in the Sacramento and San Joaquin valleys, it has not yet become conspicuous in any of the warmer sections of the state as a producer of forage. There it is at best a low under-cover plant that produces some feed and probably contributes some nitrogen to improve soil conditions. Further experience is necessary to define its range and usefulness in irrigated pastures in this state. **Per lb. \$1.85.**

Bird's-Foot Trefoil. A perennial and a native of Europe and Asia, bird's-foot trefoil (*Lotus corniculatus*) has recently been widely publicized and perhaps overstressed as a wonder forage for irrigated, semi-irrigated, and sub-irrigated lands. It is being widely tested throughout the state to find its best use and value, but as yet our experience with it is too limited to justify its general use in irrigated pastures. It is producing hay and forage on the coastal plains of Humboldt County and is being grown in the delta of San Joaquin and Solano counties and on a sub-irrigated field near Dos Palos in Merced County. These limited experiences, plus the early results of tests in a number of counties, indicate that this legume may have a place on moderately alkaline lands where irrigation or seepage waters are sufficient to meet its needs. The possible use of bird's-foot trefoil in dense Bermuda stands has been suggested elsewhere in this catalog. It may well find a place in areas where irrigation water cannot be applied often enough for Ladino clover, but probably will not supplant the latter for general use. **Per lb. \$2.50.**

Domestic Ryegrass. Domestic ryegrass (*Lolium multiflorum*) is a short-lived perennial and a native of Europe. So much breeding and selection work has been done on the ryegrasses (of the genus *Lolium*) and so many local and trade names have thus been attached to them that a word of general explanation may not be out of place here. Practically all the cultivated ryegrasses originate in two species: *Lolium multiflorum*, most commonly called "Italian ryegrass" or "annual ryegrass", and *L. perenne*, generally known as "perennial ryegrass", or "English ryegrass". Some call them both short-lived perennials, while others call Italian ryegrass a short-lived grass, usually an annual. Various selections of Italian ryegrass are known as "Western-grown", "Oregon grown", "Domestic", "Wimmera", and "Westerwold". Commercial seed now marketed here is most commonly known as Western grown or as Domestic ryegrass, and it seems fairly certain that this contains a considerable percentage of hybrids with perennial ryegrass. In any event, mother stools have been known to survive in California for three or four years. Pacey's ryegrass, Clunes ryegrass, and many other selections of perennial ryegrass have no outstanding merit above that of the parent. All strains of Italian ryegrass can be distinguished from perennial ryegrass by the fact that the emerging leaves are rolled while in the latter they are folded. Generally there are short awns on the seeds of Italian ryegrass and not on perennial, but this character varies markedly.

Domestic ryegrass is a more stemmy and less leafy plant than perennial. It owes its popularity as an irrigated pasture plant in California to its high palatability, its excellent growth and consequent high production and its early-spring growing habit. This latter quality renders it valuable as early feed and as a moderately good competitor with the flush spring growth of Ladino clover—hence a valuable bloat deterrent. No other grass we now have can compete with it in these respects. It does tend to become dormant in late summer and should be mixed with other grasses to supplant it at that season. **Per lb. 25c.**

Perennial Ryegrass. Perennial, or English, ryegrass (*Lolium perenne*) is fully as palatable as Domestic and bears more basal leafage, but does not produce as high a yield. It grows later in the summer and is desirable from that standpoint. In pastures that are to be used largely for sheep, this is probably a better grass than its coarser relative. **Per lb. 40c.**

Orchard Grass. A perennial and a native of Europe, orchard grass (*Dactylis glomerata*) can be readily distinguished by its large circular bunches, folded leaf blades, and compressed or flattened sheaths (especially at the base of the stems). The shape of the flower head has suggested the English name of "cocksfoot". Though orchard grass is coarse and tufty, it has retained its popularity in pasture mixtures here because it is hardy, persistent, and aggressive and is relished in the earlier stages of growth by all classes of livestock. Even sheep relish the abundant leafage, though they are inclined to avoid the main culms and heads. Thus they often permit too much maturity and woodiness, and coarse tussocky bunches result, which lead to some complaint against this valuable grass. Careful management is essential, and clipping should be resorted to whenever necessary to keep orchard grass from getting beyond the stage of greatest usefulness. **Per lb. 50c.**

Meadow Fescue. A perennial and a native of Europe, meadow fescue (*Festuca elatior*) is a tall-growing bunch grass that normally ripens as a mid-season grass. But it is very favorably considered in the Middle West as a late fall feed, since it remains active very late under grazing. It is not so tufty as orchard grass, but contains much basal leafage which is bright green and very succulent. Meadow fescue starts very slowly in a mixed pasture and may not be much in evidence for several years. Under proper management it should be very durable, particularly where summer temperatures are not too high. **Per lb. 60c.**

Tall Fescue. Tall fescue (*Festuca elatior* 29366) is a selection of meadow fescue and, like it, a perennial, but more drought-tolerant. It is thrifter in growth than the parent and bears more abundant basal leafage. Tests of two years here in California have indicated that it is adapted to a wide range of conditions. **Per lb. 90c.**

Harding Grass. A perennial, Harding grass (*Phalaris tuberosa* var. *stenoptera*) came to us from Africa though the species, *P. tuberosa*, is a native of the Mediterranean. Harding grass grows in large, dense, leafy tufts. When once established, it is very persistent. High seed prices and low germination have hindered the fullest use of this plant. It is one of the few perennials that makes a good growth during the winter when most other plants are dormant, but it will not survive the cold winters of northeastern California. Harding prefers heavy black soils and deep volcanic loams, but will produce well on lighter soils underlain by heavier strata. Though a tall and rather coarse grass, its abundant leafage is relished by all classes of livestock. Only a light seeding (2 or 3 pounds per acre) is recommended as a means of prolonging the pasture season in the more temperate parts of the state. **Per lb. \$1.75.**

Dallis Grass. A perennial and a native of South America, Dallis grass (*Paspalum dilatatum*) normally has a deep, strong root system and grows in clumps which tend to die out in the center and enlarge around the periphery as the plant ages. Ladino-clover plants in association with it are often found occupying the centers of these old stools. After nearly 20 years of experience, this association is classed as ideal by graziers who like Dallis grass. The leaves are numerous near the ground but few on the stems, which are usually drooping or angled. In most of the state (except the colder portions where it will not survive the winters), it starts rather late in the spring and becomes dormant in the fall. But during the summer its recovery after grazing is more rapid than that of any other grass we have. Its aggressiveness in this respect has brought it into disrepute with some operators since other grasses, it is not so palatable as it approaches maturity. Some irrigation districts oppose the use of this grass because its light oily seeds float on the water and the plants become established along the ditch banks. The contention does not seem well founded since such areas are generally occupied by plants much less desirable, and frequently more difficult to control than is Dallis grass. **Per lb. \$1.00.**

Smooth Brome. A perennial and a native of central Europe and China. Smooth brome (*Bromus inermis*) is a tall-growing leafy grass that spreads by underground creeping rhizomes which tend to become sod-bound in a few years so that renovation is essential to the best results. In northeastern California, smooth brome is popular as a hay and pasture plant, but it has never found a place in any part of the state in which the winters are mild and summer temperatures high. Its general use is therefore not recommended. **Per lb. 85c.**

Kentucky Bluegrass. A perennial and a native of Europe and Asia, Kentucky bluegrass (*Poa pratensis*) is a true creeping, or colony, grass. While it is primarily adapted to the colder parts of the state, it is not generally recommended there for planting in a pasture mixture. The objections to it are that it produces too dense a sod and that its growth is not luxuriant enough to provide adequate livestock-carrying capacity. In recent years Kentucky bluegrass has come into the pasture picture in parts of the San Joaquin and Sacramento valleys. Some producers believe it has a place there in association with Ladino clover, especially for sheep. Observations in several counties indicate that it is crowding out the clover and that it does not yield so much forage as the stronger-growing plants available. This may be partly due to a lack of adaptation in these areas. Prospective planters should make observations on local experience, where available, before committing themselves to bluegrass in irrigated pastures. **Per lb. \$1.40.**

Rhodes Grass. A perennial and a native of South Africa, Rhodes grass (*Chloris Gayana*) is a fine-stemmed, leafy grass growing to an average height of nearly 3 feet under favorable conditions. It spreads by running branches which root and produce a tuft at every node. It will not withstand winter temperatures below 18° F. Rhodes grass is increasing in popularity as an ingredient of pasture mixtures in the Palo Verde and Imperial valleys of southeastern California, doubtless because it is quite at home there. Farther north, within its climatic limitations, it is not generally used except in areas that are too alkaline to be tolerated by most other species. On such sites it probably has a real place. Through its ability to absorb alkali salts, however, it may become so saline as to have a scouring effect on livestock. When this is true, the stock should be rotated to other and less purgative feeds. **Per lb. 95c.**

Tall Meadow Oatgrass (*Arrhenatherum elatius* (L.) Beauvois); sometimes called tall oatgrass, meadow oatgrass, and evergreen grass, is a hardy perennial growing to the height of 30 to 60 inches and producing large tufts or bunches. It produces seed in an open head, or panicle, somewhat similar to cultivated oats, though the seed is much smaller and more chaffy. **Per lb. \$1.25.**

Red Fescue (*Festuca rubra* L.) is very similar to sheep fescue, but the leaves are bright green and the plant does not grow in tufts but creeps by underground stems, so that one plant may eventually cover a circle 2 to 4 feet in diameter.

PARAMOUNT No. 23 SUDAN

A few years ago the Division of Agronomy developed a new strain of Sudan that is far superior to the old strains. They named it No. 23 and it is rapidly succeeding the old strain. The leaves are finer, stalks are finer and sorghum crosses have been eliminated. Tests conducted have shown that it will yield a ton and a quarter more to the acre than the old variety.

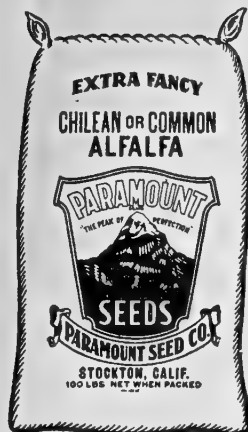
The small difference in the costs of the seed is more than offset in the crop production. Good for both pasture and hay. Write for latest market prices.



SUDAN
GRASS

Paramount Extra Fancy Chilean or Super Dairy Alfalfa Seed

Scarified FOR QUICK GERMINATION



Extra Fancy CHILEAN or COMMON

- Only carefully tested seed shown to be free of noxious weeds are allowed to go into PARAMOUNT Brand. Saves you the cost of eradicating weeds. Brings a better price for your hay.
- PARAMOUNT'S finest grade of Chilean Alfalfa Seed—"The Peak of Perfection"—extra fancy in every respect with a purity of 99.75 or better, and germination of 90 per cent or better. It will please the most critical grower. Per lb. 55c.
- Rich uniform growth of PARAMOUNT Seed the result of careful blending of seed from different native sources. Seed selected from THE NORTH (hardier, longer lived but slower growing alfalfa)—CENTRAL AREA (medium growing, fine-leaved alfalfa)—THE SOUTH (early, quick-growing, shorter lived alfalfa).
- PARAMOUNT'S mill is equipped with modern machinery for removing chaff, dirt, gravel, dead and green seeds. You get only plump seeds of uniform size, free from impurities.
- PARAMOUNT'S method of scarifying is complete and thorough. Quick and even sprouting is assured by scratching the hard outer coat of the seed so that the moisture will penetrate. This is done on delicate emery-equipped machines. During the process all immature seeds are broken and eliminated.
- PARAMOUNT seed is scientifically tested both for purity and germination. Thousands of tests are made during the season by testing experts. Only recent tests will be found on PARAMOUNT' label.

SELECTED FIELD CORN

KING PHILIP—YELLOW

This is a hard yellow flint corn and is generally referred to as 90-day corn. It is drought-resisting and will give a fair yield where most corns are a failure. Plant 8 to 10 pounds per acre in hills for shelled corn or for silo. 1 lb. 15c; 10 lbs. \$1.00.

REID'S YELLOW DENT

In the upland sections requiring a corn that will mature in about 115 days, Reid's Yellow Dent has made a well-deserved reputation because of its large yields and superior type of ear. It is a big yielder on good loam and heavy land, making ears that average 9 to 10 inches long with 18 to 24 rows to the ear, and well filled out at butt and tip. It is a true dent corn, the grains are medium narrow, wedge-shaped, and the rows are so close that there is practically no waste space between the rows. The cob is small for the size of the ear; makes one or two ears to the stalk. Lb. 15c; 10 lbs. \$1.00. Write for prices on larger quantities.

IMPROVED LEAMING

Leaming is known the country over as a big yielding, early maturing yellow corn, making generally two big ears to the stalk with rarely a barren stalk. It does well on all soils, but prefers light to medium soils. The grain is wedge-shaped and covers the entire cob. The ears average about 10 inches long, with 18 to 20 rows to the ear. The color is a deep, reddish yellow. Matures in about 100 days. Lb. 15c; 10 lbs. \$1.00.

HICKORY KING

The grain is so wide and deep and the cob so small that often a single grain will cover the end of a broken cob. It has been called Poor Man's Corn, because it can be depended upon to produce a crop on poor, thin land; on good land it bears two ears to the stalk. Lb. 15c; 10 lbs. \$1.00.

IMPROVED WHITE DENT

Or Stanislaus White Dent

Improved White Dent has been the reliable old stand-by with southern corn growers, and its merits are generally recognized. It makes a single ear to the stalk, but they are long and heavy; the grains are quite wide, deep and firmly set on a medium-sized cob. The stalk is tall and carries a good growth of fodder. Lb. 15c; 10 lbs. \$1.00.

EARLY MATURING—HEAVY YIELDING

Proper selection of Seed Corn is a matter of working year after year, planting good seed in the beginning, watching the particular stalks which grow best and which set enough ears the proper distances from the ground, and then cutting the tassels from all other stalks in the field. The seed ears must be selected on the stalk, and ripened and dried under correct conditions. The grains must be shelled and stored and graded so they will be even in size, and their vitality maintained unimpaired. Finally, the seed must be tested for germination. We have picked growers who give their corn crops the attention necessary to produce first-class seed.

EUREKA ENSILAGE

Eureka Ensilage corn is without a doubt the heaviest yielding ensilage corn adapted to California climatic conditions. It grows to an average height of 14 feet, has very leafy stalks bearing one to three ears to the stalk, and has established a record of an average production of 30 to 35 tons per acre. This when cut and put in the silo furnishes a feed that is very succulent and of the highest feeding value, and is relished by all kinds of stock.

Our seed stock of Eureka Ensilage Corn for this season is of exceptionally fine quality and selected for size uniformity for both ear and kernel. Lb. 15c; 10 lbs. \$1.00. Write for quantity prices.

ORANGE COUNTY PROLIFIC

Orange County Prolific is a California product of the white dent variety. It is also an exceptionally heavy yielder and highly recommended for ensilage purposes. We consider it next on the list following Eureka Ensilage Corn. What we have said regarding the selection of our seed stock for Eureka Corn also applies to this variety. Price per lb. 15c; 10 lbs. \$1.00. Write for quantity prices.

MEXICAN JUNE CORN—WHITE

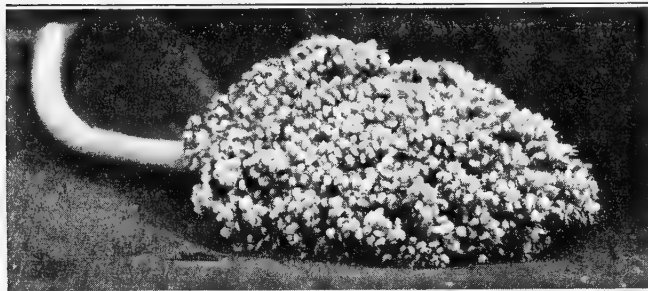
Or Pride of Modesto

Very early and hardy, stalks growing to an average height of 7 or 8 feet and producing 30 to 60 bushels of corn per acre. This corn is also used for roasting purposes in many sections of California. 1 lb. 15c; 10 lbs. \$1.00.

Grain Sorghums

SELECTED DWARF MILO MAIZE

Since the cost per acre of Milo Maize Seed is very small it certainly pays to secure the best seed obtainable. Where the soil is properly prepared it requires but 3 to 4 lbs. per acre, therefore, the cost of seed would be but a few cents, hence Milo Maize Seed should be considered entirely from the quality standpoint. Yield of grain per acre is what you want and you cannot afford to experiment on strains that are being grown by inexperienced growers. Being of uniform height it may be harvested by machinery, but if harvested by hand the large heads reduce the cost of harvesting. It grows to a height of about 4 feet, is of stooling habit, and individual hills of 5 to 7 stalks in a stool each producing a large compact head are not uncommon throughout the field. We produce our seed maize in isolated districts where there are no other sorghum crops grown near and by hill and head selection each year, the strain is kept uniform and true. Considering again that it requires but a few cents per acre to plant the very best Milo Maize Seed, there appears to be no good reason why the planter should experiment with untried strains. If you are going to plant Maize, let us send you a sample of our seed and quote prices on quantity. **Lb. 10c; 10 lbs. 75c.** Write for quantity prices.



EGYPTIAN CORN

DOUBLE DWARF MILO MAIZE

This variety of Red Milo Maize is very dwarf, growing only 2 to 2½ feet high and has been developed especially for convenience and economy in harvesting. It can be cut and harvested by machinery in the same manner as heading grain. Very profitable crop to grow, the average yield being two tons per acre. Sow at the rate of 4 to 5 lbs. per acre from April until middle of June. **Lb. 10c; 5 lbs. 75c.** Write for quantity price.

WHITE MILO MAIZE

Grows same as Dwarf Red Milo and the kernels are almost pure white. **Lb. 10c; 10 lbs. 75c.**

EGYPTIAN CORN

This is also one of the drought resisting non-saccharine crops. The grain is produced in large compact heads and the seed is flat and pure white. This seed is used very extensively as a chicken feed and also ground into flour which is used for edible purposes. Plant the same as Milo Maize. **Price per lb. 10c; 10 lbs. 75c.**

HONEY SORGHUM

Is the prize variety without a doubt. All growers every year are loud in its praise. Honey Sorghum is a selection from one of the earliest introductions, and has been regarded with special favor for ensilage and for syrup purposes. It is the best variety for silage purposes, having slender leafy stalks, varying in height from 8 to 12 feet. It is medium late maturing and has decidedly tender stalks, and is important from a forage standpoint. Imagine an average of 27 tons or over per acre. The method of seeding will be determined largely by the purpose for which it is grown. When the crop is to be used for fodder or silage, it is usually planted in rows 3 to 3½ feet apart, using up to 5 pounds of seed per acre. **Price per lb. 10c; 10 lbs. 85c.** Write for special prices in larger quantities.

EARLY AMBER

Furnishes a large field of most nutritive forage which can be fed either green or cured, and will yield two or three cuttings a year, stooling out thicker each time it is cut. It grows 10 to 12 feet high. Sow broadcast for forage at the rate of 15 pounds per acre. **Per lb. 10c; 10 lbs. 85c.**

Cover Crop Seeds

MELILOTUS INDICA

One of the best legumes for green manuring in the orchards of California, because it may be planted late in the fall after all crops have been harvested, will grow all winter with only the season's rainfall. It prevents erosion during the rainy season, is easily plowed under, is richer as a fertilizer and if allowed to stand until July will prevent much of the June drop. Melilotus Indica is the best legume with which to build up your soil during the rainy season for the summer crop to follow, particularly potatoes and melons. Sow 20 lbs. per acre. **Per lb. 20c; 10 lbs. \$1.75.** Ask for quantity price.

CANADIAN FIELD PEA

When it is too late to plant Vetch or Melilotus plant Canadian Peas. They may be planted as late as January and yet be plowed under in time for planting a summer crop. If your summer crop, like melons and potatoes, is not harvested until November, plant Canadian Peas. Neither is the Canadian Pea inferior to other cover crops when planted at the right time, which is from September to February. If the soil is too wet after planting the seed will rot. Broadcast 50 to 60 lbs. per acre. **Per lb. 15c; 10 lbs. \$1.45.** Write for quantity price.

PURPLE VETCH

The chief value of Purple Vetch lies in its rapid growth. It does not have the same tendency to stop growing when the thermometer registers around 26 degrees as do many other varieties of cover crop. However, it does not stand quite as much cold as Melilotus Indica. It is one of the leading cover crops for planting during the rainy season in citrus orchards and for this purpose 60 lbs. should be sown to the acre. It is also a valuable crop for hay or silage. **Lb. 20c; 10 lbs. \$1.75.** Write for quantity price.

COMMON VETCH

This variety also makes an excellent cover crop for fall sowing and is commonly sown with oats, wheat, rye or barley. When grown together the vetch is held off the ground and at the same time fertilizes the grain crop. For this intention sow 30 lbs. grain and 20 lbs. vetch to acre, or if planted alone, 60 lbs. of vetch per acre. **Per lb. 20c; 10 lbs. \$1.75.** Write for quantity price.

BROAD WINDSOR BEAN

Sometimes called Horse Beans, grows upright on a single stem bearing a profusion of large well-filled pods. The roots are enormously productive of nitrogen. It will withstand 28 degrees temperature; therefore, may be planted as late as September for best results as a winter cover crop. Sow 60 to 80 lbs. per acre. **Lb. 25c; 10 lbs. \$2.00.** Write for quantity prices.

WILD BLACK MUSTARD

(Brassica nigra.) Used to some extent for a cover crop. Sow 8 to 10 lbs. per acre. **Lb. 20c; 10 lbs. \$1.95.**

WHITE MUSTARD

(Brassica alba.) This white seed mustard has yellow flowers and is thus sometimes called Yellow Mustard. It grows very rapidly and is now used extensively as a cover crop. Sow 10 to 15 lbs. per acre. **Lb. 25c; 10 lbs. \$2.00.**

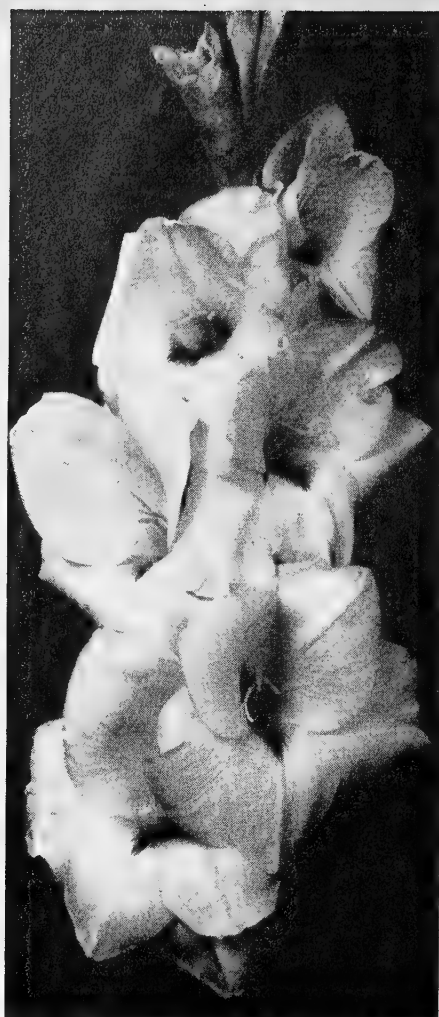
TRIESTE MUSTARD

(Brassica juncea.) The most commonly used mustard. Although not so rapid in growth as the white mustard it makes a heavier tonnage. Sow 6 lbs. per acre. **Lb. 25c; 10 lbs. \$2.00.**

READY REFERENCE CHART

Detailed Descriptions Elsewhere in This Bulletin

COMMON NAME	ANNUAL OR PERENNIAL	RATE AND TIME OF SEEDING	SOIL AND MOISTURE CONDITIONS
ALFALFA	Perennial	15-20 lbs. drilled. 25 Broadcast. 2- 4 lbs. in Mixtures Fall and Spring	Deep, well drained soil. Requires irrigation.
ALSIKE CLOVER	Perennial	4-6 lbs. Broadcast. Fall and Spring	Will stand more moisture than other legumes.
BERMUDA GRASS	Perennial	6-8 lbs. Broadcast. Spring after frosts are over.	Wide tolerance to both moisture and drouth.
BIRDSFOOT TREFOIL	Perennial	4-5 lbs. Broadcast. 1-3 lbs. in mixture Fall and Spring	Will stand both excessive moisture and drouth. Partially tolerant to alkali.
BLUEGRASS	Perennial	10-15 lbs. Broadcast 2- 5 lbs. in mixtures Fall and Spring	Well drained loam with frequent irrigations.
BUR CLOVER	Annual	15-20 lbs. Broadcast 2- 6 lbs. mixtures Fall and Early Winter	Grows during winter months producing feed when other legumes are not growing. Usually reseeds itself.
BURNET	Perennial	2-4 lbs. in mixtures Fall.	Stands considerable drouth. Not a grass plant. Use only in mixtures.
BROMEGRASS (Smooth & Awnless)	Perennial	12-20 lbs. Broadcast 3- 6 lbs. mixtures Fall and Spring	Prefers heavy soil in high altitudes. Drouth resistant.
BUFFALO GRASS (Mesquite)	Perennial	2-3 lbs. in mixtures Fall and Spring	Best on clay soils. Withstands drouth.. Forms heavy sod.
CREeping RED FESCUE	Perennial	15-20 lbs. Broadcast 2- 5 lbs. in mixtures Fall and Spring	Adapted to light soils and shaded locations.
CRESTED WHEAT GRASS	Perennial	10-12 lbs. Broadcast 3- 6 lbs. Mixtures Fall and Spring	Deep rooted and drouth resistant.
DALLIS GRASS	Perennial	2-4 lbs. in Mixtures Fall and Spring	Will stand excessive moisture. Is also drouth resistant when established.
HARDING GRASS	Perennial	8-10 lbs. Broadcast 2- 4 lbs. in mixtures Fall and Spring	Produces good growth during winter months in central valleys. Drouth resistant.
LADINO CLOVER	Perennial	4-6 lbs. Broadcast 2-4 lbs. Mixtures Fall and Spring	Most widely used of all pasture clovers. Requires frequent irrigation; will bloat unless planted with grasses.
MEADOW FESCUE	Perennial	8-15 lbs. Broadcast 4- 8 lbs. Mixtures Fall and Spring	Light to heavy soils, well drained. Excellent in mixtures.
ORCHARD GRASS	Perennial	20-25 lbs. Broadcast 3- 8 lbs. in Mixtures Fall and Spring	Best on medium soils not excessively moist. Somewhat drouth resistant. Widely used.
RED CLOVER	Short-lived Perennial	10-12 lbs. Broadcast 2- 4 lbs. in Mixtures Fall and Spring	Rich, well-drained soils. Not adapted to the central valleys.
RED TOP	Perennial	2-5 lbs. in Mixtures Fall and Spring	Wide adaption—dry to wet. Seldom used in central valleys.
REED CANARY GRASS	Perennial	8-10 lbs. Broadcast 2- 5 lbs. in Mixtures Fall and Spring	Swampy lands in cool locations. Not adapted to warmer areas.
RHODES GRASS	Perennial	6-8 lbs. Broadcast 2-3 lbs. in Mixtures Early Spring	Will tolerate some alkali, and make good summer growth in warm areas.
RYEGRASS, DOMESTIC	Annual	20-25 lbs. Broadcast 4- 8 lbs. in Mixtures Fall and Spring	Widely adapted to all soils with sufficient irrigation. Generally used in mixtures.
RYEGRASS, PERENNIAL	Perennial	20-25 lbs. Broadcast 4- 8 lbs. in Mixtures Fall and Spring	Best of the Ryegrasses. Slower in growth than the annual, but grows for longer period.
STRAWBERRY CLOVER	Perennial	6-8 lbs. Broadcast 2-4 lbs. in Mixtures Fall and Spring	Needs constant moisture supply but will tolerate some alkali.
SUBTERRANEAN CLOVER	Annual	8-10 lbs. Broadcast 2- 4 lbs. in Mixtures Fall and Early Spring	Produces early feed on light soils.
SWEET CLOVER, WHITE BLOSSOM	Biennial	15-20 lbs. Broadcast 4- 6 lbs. in Mixtures Fall and Spring	Well drained soils, moderate irrigation. Will withstand considerable alkali.
SWEET CLOVER, HUBAM	Annual	15-20 lbs. Broadcast 4- 6 lbs. in Mixtures Fall and Spring	Well drained soils, moderate irrigation. Will withstand considerable alkali. Adapted only to warmer areas.
SWEET CLOVER, YELLOW BLOSSOM	Biennial	15-20 lbs. Broadcast 4- 6 lbs. in Mixtures Fall and Spring	Well drained soils, moderate irrigation. Will withstand considerable alkali.
TALL FESCUE	Perennial	10-15 lbs. Broadcast 2- 6 lbs. Mixtures	Similar to Meadow Fescue, but taller. Same soil and moisture conditions.
TALL MEADOW OAT GRASS	Perennial	10-18 lbs. Broadcast 2- 8 lbs. Mixtures Fall and Spring	Adapted to cold regions. Partially drouth resistant.
TIMOTHY	Perennial	10-12 lbs. Broadcast 2- 5 lbs. in Mixtures	Requires cool, moist climate. Not adapted to central valleys.
WHITE DUTCH CLOVER	Perennial	4-6 lbs. Broadcast 2-4 lbs. Mixtures Fall and Spring	Adapted to most soils (except alkali) when frequent irrigation is possible. Ladino is preferable.



GLADIOLUS, SPOTLIGHT

Gladiolus

The varieties marked * are the top Blue Ribbon Winners in the 1947 Symposium.

***Algonquin.** Brilliant glowing scarlet. 8-10 wide, open ruffled needlepoint blooms on a tall straight spike.

Barcarole. (Palmer). Large clear grenadine orange with no markings. Beautifully ruffled blooms of heavy substance.

Beacon. (Palmer). Clear bright rose-scarlet with a large cream blotch; medium large, slightly ruffled, 8 to 10 open on a very tall straight spike.

Bit o' Heaven. Beautiful shade of orange with a yellow throat. Opens 9-12 medium sized blooms on a tall, straight plant.

***Black Opal.** Probably the darkest of all gladiolus, the color being a deep black red. The finest of the dark shades.

***Blue Beauty.** (Pf.) Light blue, shading darker toward the edges, giving the appearance of medium blue. Large wide open round flowers.

***Burma.** A striking deep rose shading to a lighter tone in the throat of the heavily ruffled flowers.

Chamouny. Cerise rose, silver edged flowers of medium size, round and lightly ruffled. 8 to 10 flowers open at a time. A most distinct and beautiful mid-season variety.

Commander Koehl. (Pf.) Large dark scarlet red, without marking or blotches. Individual florets $6\frac{1}{2}$ inches across, of which there are six or seven open at a time.

***Corona.** Creamy white petals shading to rich cream in the throat, the edges beautifully picoteed with rose pink.

***Elizabeth the Queen.** Clear lavender-mauve flowers beautifully ruffled and shaped. An outstanding variety for show or cutting.

Golden Chimes. Long straight spikes bear large flowers of a beautiful yellow. Perfect form.

***Greta Garbo.** Creamy rose shades to light pink. Perfect florets, well placed on straight spikes. Wonderful show variety.

J. S. Bach. (Pf.) Salmon with white midrib. A wonderful exhibition variety with as many as eight florets open on tall spikes. One of the largest of the early blooming Gladiolus.

King Lear. Clear, deep reddish purple with silver line on edge of petals. 5-6 blooms open on a tall, strong, slender spike.

***Lady Jane.** Free blooming, with large ruffled flowers of a clear smooth cream; yellow lip.

***Leading Lady.** Cream white. A sport of Picardy with all of its outstanding qualities.

***Margaret Beaton** (Twomey). One of the most beautiful blotched varieties. Tall, large and white with small scarlet feather. Opens about eight flowers. Good propagator.

Minuet. (Coleman). Wonderful clear lavender. A lavender by which all others are judged. Six or seven wide open florets open at a time. Arranged perfectly on straight spike.

Mother Machree. A beautiful combination of a wine-tinted lavender overlaid with salmon-pink.

Pelegrina. The large deep blue flowers have a strong appeal due to their color and fine arrangement of the florets.

***Picardy** (Palmer). Color soft apricot pink with a silvery sheen, feathering of slightly deeper color in the throat.

***Purple Supreme.** Bright purple flowers well spaced on the tall slender stems. Good grower and will not burn in the sun.

***Red Charm.** Unique shade of medium red that is very attractive. Large, sturdy grower of great vigor.

Rosa Van Lima. Light rose with a few darker lines in the throat. Up to 8 or more well placed blooms on a tall strong spike prolific.

Shirley Temple. (Pruitt.) Creamy-white with a darker throat. Individual florets over 6 inches across, with 6 or 7 open. Splendid grower.

Snow Princess. An excellent white variety for exhibition and cut flowers. Tall, vigorous grower.

***Spotlight.** The finest yellow. Large blossoms of clear deep yellow with a small blotch of red in the throat.

***Vagabond Prince** (Palmer). Iridescent garnet-brown, lighter in upper throat and small blotch of glowing scarlet-red on lip petals. 8 to 10 open on tall straight spike. Prolific.

White Gold. Huge creamy white blooms, golden yellow in the throat. A vigorous grower with good straight stems.

Yellow Emperor. (Ellis.) Large flowered deep yellow. Vigorous grower. Best yellow in its class.

Tuberous Begonias

These brilliant colored summer flowering bulbs of easy culture are ideal for shade. Along the coast of Oregon, Washington and California they are among the most popular flowers of today. Our bulbs are from selected strains.

Plant indoors in a warm place in February or March in moist sand or peat moss just covering the bulb. Pot up when well sprouted in a mixture of peat moss, humus or soil. Plant outdoors after danger of frost (early May in this section). They do best on the north side of a building or other location where they are shaded much of the day. To be successful prepare soil carefully and add liberal quantities of peat moss or well decayed leaves. Keep well watered and fertilized. Dig and store in late fall in a dry place during the winter. Warning — Failure is likely to result from planting dormant tubers in open ground, especially if it is cold and wet.

DOUBLE CAMELLIA TYPE

The largest and most popular types. Individual flowers from 4 to 8 inches in diameter, resemble Camellias and Roses, in all forms and variations in color.

Colors: White, yellow, cardinal, red, pink, rose, blush, dark red, orange, apricot, flame, orange.

Prices

Tubers—Delivery January-March.

Large size $1\frac{1}{2}$ inches at 40c each;
\$3.50 per dozen.

SINGLE FRILLED TYPE (CRISPA)

Perhaps the most adorable of the single types—beautifully frilled and ruffled on the edge.

Colors: Orange, apricot, red, salmon, pink.

Tubers—Delivery January-March.

Large size $1\frac{1}{2}$ inches at 35c each;
\$3.50 per dozen.

TIGRIDIA OR MEXICAN SHELL FLOWER

Bright, fantastically colored summer blooms lasting until frost. A most satisfactory summer bedder for full sun.

Give the same treatment as gladiolus, planting 4 inches deep and 6 inches apart from late February until May. Ordinary garden soil. Enjoys plenty of moisture. **Mixed Colors.**

20c each; \$1.95 per dozen.



TUBEROUS BEGONIA, SINGLE FRILLED

MONTHLY PLANTING GUIDE

JANUARY

VEGETABLES—Seeds of Asparagus, Beets, Brussel Sprouts, Cabbage, Carrots, Chicory, Corn Salad, Cress, Eggplant, Kale, Kohl Rabi, Lettuce, Mustard, Onions, Parsley, Peas, Peppers, Potatoes, Radish, Rhubarb, Salsify, Spinach (Winter), Tomatoes, Turnips.

FLOWERS—Sow seeds of hardy annuals in the open ground: Acroclinium, Alyssum, Antirrhinum, Calendula, Calliopsis, Candytuft, Centaurea, Annual Chrysanthemums, Clarkia, Larkspur, Lupin, Mignonette, Nigella, Poppies, California Poppy, Wild Flower Seed and Sweet Peas.

FEBRUARY

VEGETABLES—Seeds of Asparagus, Beets, Beans, Cabbage, Carrots, Celery, Chives, Chicory, Corn, Corn Salad, Cucumbers, Eggplant, Horse Radish, Kale, Kohl Rabi, Lettuce, Mustard, Onions, Parsnip, Peas, Peppers, Potatoes, Sweet Potatoes, Squash, Radish, Rhubarb, Salsify, Spinach (Summer), Tomatoes, Turnips.

FLOWERS—Sow seeds in open ground: Acroclinium, Antirrhinum, Calendula, Calliopsis, Centaurea, Early Flowering Cosmos, California Poppy, Larkspur, Linum, Lupins, Mignonette, Nemophila, Nigella, Poppies, Scabiosa and Sweet Peas.

Sow seed in boxes: Balsam, Begonia, Coreopsis, Gaillardia, Hollyhock, Hunnemannia, Lobelia, Mimulus, Pentstemon, Petunia, Perennial Poppies, Salvia, Stocks and Viola Cornuta.

MARCH

VEGETABLES—Seeds of Artichoke, Asparagus, Beets, Beans, Cabbage, Chicory, Corn (Sweet and Field), Cucumbers, Eggplant, Kale, Lettuce, Melons (Musk and Water), Okra, Onions, Parsley, Parsnips, Potatoes, Sweet Potatoes, Pumpkin, Radish, Rhubarb Seed, Salsify, Spinach (Summer), Squashes, Tomatoes.

FLOWERS—Sow seeds in open ground: Acroclinium, Ageratum, Alyssum, Antirrhinum, Arcotis, Amaranthus, Balsam, Brachycome, Bartonla, Calendula, Calliopsis, Candytuft, Centaurea, Clarkia, Annual Chrysanthemum, Early Flowering Cosmos, Daisies, Four o'Clocks, Godetia, Gomphrena, Gypsophila, Helichrysum, Larkspur, Linum, Lupin, Marigold, Mignonette, Nasturtium, Nemesia, Nemophila, Nigella, Phlox, Poppy, Scabiosa, Sunflower and Sweet Peas.

Sow in seed boxes or with some protection for transplanting later: Asters, Begonia, Bells, Daisy, Celosia, Columbine, Canterbury Bells, Coreopsis, Cyclamen, Dahlia, Gaillardia, Gerbera, Heliotrope, Hunnemannia, Lobelia, Matricaria, Myosotis, Pentstemon, Petunia, Poppies, Salvia, Shasta Daisy, Statice, Sweet William, Verbena, Viola, Wallflower, Zinnia. Sow seeds of Vines.

APRIL

VEGETABLES—Seeds of Artichoke, Asparagus, Beets, Beans, Carrots, Cabbage, Celery, Corn (Sweet and Field), Cress, Eggplant, Kale, Lettuce, Melons (Musk, Water and Casabas), Okra, Onions, Parsley, Peas, Peppers, Parsnip, Potatoes, Sweet Potatoes, Pumpkin, Radish, Rhubarb Seed, Salsify, Spinach (Summer), Squash, Tomatoes.

FLOWERS—Seeds of Abronia, Acroclinium, Ageratum, Antirrhinum, Amaranthus, Asters, Balsam, Aquilegia, Begonia, Bellis, Brachycome, Calendula, Calliopsis, Candytuft, Canterbury Bells, Carnation, Annual Chrysanthemum, Celosia, Centaurea, Clarkia, Coreopsis, Cosmos, Cyclamen, Dahlia, Daisies, Delphinium, Digitalis, Dianthus, Gaillardia, Godetia, Gerbera, Gypsophila, Gomphrena, Heliotrope, Helichrysum, Hunnemannia, Hollyhock, Larkspur, Lobelia, Linum, Lupin, Marigold, Myosotis, Mirabilis, Mimulus, Mignonette, Nasturtium, Nemesia, Licotiana, Nigella, Pentstemon, Petunia, Phlox, Poppies, Portulaca, Salvia, Salpiglossis, Scabiosa, Schizanthus, Stevia, Stocks, Statice, Sweet William, Verbena, Viola, Sunflower, Wallflower, Zinnia.

MAY

VEGETABLES—Seeds of Artichoke, Asparagus, Beets, Beans, Cabbage, Carrots, Celery Plants, Corn (Sweet and Field), Cucumber, Eggplant, Lettuce, Melons (Musk, Water and Casabas), Okra, Onions, Parsley, Parsnip, Peas, Peppers. Transplant Potatoes, Sweet Potatoes (Plants). Pumpkin, Radish, Rhubarb, Salsify, Spinach (Summer), Squash, Tomato.

FLOWERS—Seeds of Abronia, Acroclinium, Ageratum, Amaranthus, Asters, Balsam, Carnation, Calendula, Celosia, Centaurea, Calliopsis, Cosmos, Daisies, Annual Chrysanthemum, Candytuft, Dianthus, Gaillardia, Lobelia, Larkspur, Marigold, Matricaria, Hunnemannia, Gomphrena, Gypsophila, Helichrysum, Nasturtium, Nemesia, Necotiana, Nigella, Phlox, Portulaca, Salvia, Salpiglossis, Scabiosa, Schizanthus, Stevia, Sunflower, Statice, Zinnia.

JUNE AND JULY

VEGETABLES—Seeds of Artichoke, Beets, Beans, Cabbage, Carrots, Celery Plants, Corn (Sweet and Field), Cucumber, Eggplant, Lettuce, Melons (Musk, Water and Casabas), Okra, Parsley, Parsnip, Peas, Pepper Plants, Potatoes, Sweet Potatoes (Plants), Pumpkin, Radish, Spinach (Summer), Tomato.

FLOWERS—Seeds of Calendula, Candytuft, Cosmos, Centaurea, Cineraria, Daisies, Marigold, Nasturtium, Portulaca, Poppies, Salpiglossis, Zinnia.

AUGUST

VEGETABLES—Artichoke, Beets, Beans, early varieties; Brussels Sprouts, Cabbage, Cauliflower, Carrots, Chicory, Corn, Cress, Cucumber, Eggplant, Endive, Garlic, Kale, Kohl Rabi, Leek, Lettuce, Mustard, Onion, Parsley, Parsnip, Peas, Potatoes, Radish, Salsify, Spinach (Summer), Turnips.

FLOWERS—Calendula, Cineraria, Centaurea, Cosmos, Pansies, Primula, Stocks, Sweet Peas. Begin sowing seeds of hardy perennials for next year's flowering, such as Aquilegia, Bellis, Daisy, Canterbury Bells, Coreopsis, Cyclamen, Delphinium, Digitalis, Forget-me-not, Gaillardia, Hollyhocks, Pentstemon, Perennial Poppies, Phlox, Pyrethrum, Snapdragon, Verbena, Viola and Wallflower.

SEPTEMBER

VEGETABLES—Seeds of Artichoke, Beets, Brussels Sprouts, Cabbage, Carrots, Cauliflower, Chicory, Cress, Cucumber, Endive, Garlic, Kale, Kohl Rabi, Leek, Lettuce, Mustard, Onions, Parsley, Parsnip, Peas, Potatoes, Radish, Salsify, Spinach (Winter), Turnips.

FLOWERS—Seeds of Calendula, Centaurea, Cineraria, African Daisy, Nemesia, Cosmos, Pansy, Primula, Stocks and Winter Sweet Peas. Continue sowing hardy perennials for next year's flowering, such as Aquilegia, Bellis, Daisy, Canterbury Bells, Coreopsis, Cyclamen, Delphinium, Digitalis, Forget-me-not, Gaillardia, Hollyhocks, Pentstemon, Perennial Poppies, Phlox, Pyrethrum, Snapdragon, Verbena, Viola and Wallflower.

OCTOBER

VEGETABLES—Seeds of Beets, Brunssels Sprouts, Cabbage, Carrots, Chicory, Cress, Endive, Garlic, Kale, Kohl Rabi, Leek, Lettuce, Mustard, Onions, Parsley, Parsnip, Peas, Radish, Salsify, Spinach, Turnips.

FLOWERS—Continue sowing seeds for winter blooming of Calendula, Centaurea, Cineraria, Cosmos, African Daisy, Dianthus, Nemesia, Phlox, Pansy, Primula, Scabiosa, Stocks and Winter Sweet Peas.

Begin sowing annuals in open ground for early spring blooming: Acroclinium, Alyssum, Antirrhinum, Bartonla, Candytuft, Calliopsis, Clarkia, Annual Chrysanthemums, California Poppy, Larkspur, Lupin, Mignonette, Nigella, Poppies, California Wild Flowers. Continue sowing perennials for next year's flowering: Aquilegia, Bellis, Canterbury Bells, Coreopsis, Cyclamen, Delphinium, Digitalis, Forget-me-not, Gaillardia, Hollyhocks, Pentstemon, Perennial Poppies and Phlox, Pyrethrum, Snapdragon, Verbena, Viola and Wallflower.

NOVEMBER

VEGETABLES—Seeds of Beets, Brussels Sprouts, Cabbage, Carrots, Chicory, Cress, Garlic, Kale, Kohl Rabi, Lettuce, Leek, Mustard, Onions, Parsley, Peas, Radish, Salsify, Spinach (Winter), Turnips.

FLOWERS—Seeds of hardy annuals: Acroclinium, Alyssum, Antirrhinum, Bartonla, Calendula, Candytuft, Calliopsis, Clarkia, Annual Chrysanthemums, California Poppy, Dianthus, Larkspur, Lupin, Mignonette, Nigella, Nemesia, Pansy, Phlox, Stocks, Winter Sweet Peas and California Wild Flowers.

DECEMBER

VEGETABLES—Artichoke Plants, Asparagus Roots, Seeds of Beets, Brussels Sprouts, Cabbage, Chicory, Cress, Endive, Garlic, Horse Radish, Kale, Kohl Rabi, Leek, Lettuce, Mustard, Onions, Parsley, Parsnips, Peas, Potatoes, Radish, Rhubarb Roots, Salsify, Spinach (Winter), Turnips, Onion sets.

FLOWERS—Sow seeds of hardy annuals: Acroclinium, Alyssum, Antirrhinum, Bartonla, Calendula, Candytuft, Calliopsis, Clarkia, Annual Chrysanthemums, California Poppy, Dianthus, Larkspur, Lupin, Mignonette, Nigella, Nemesia, Pansy, Phlox, Stocks, Winter Sweet Peas and California Wild Flowers.

SAVE THIS CATALOG

Please include amount of SALES
TAX with your remittance
as follows:

KNOX SEED COMPANY

**509 E. Weber Avenue
10 W. Harding Way
STOCKTON, CALIF.**

**720 10th Street
MODESTO, CALIF.**

Name.....
(Mr., Mrs. or Miss; write name plainly)

Street.....R. D.....Box.....

Post Office.....P.O.Box.....

State.....*Express or*
Freight Office.....

Forward goods by Parcel Post.....Express.....Freight.....
Check how goods are to be sent.

Date _____

Amount Enclosed

**Do Not Write in
This Space**

Money Order

Cash.....

Stamps.....

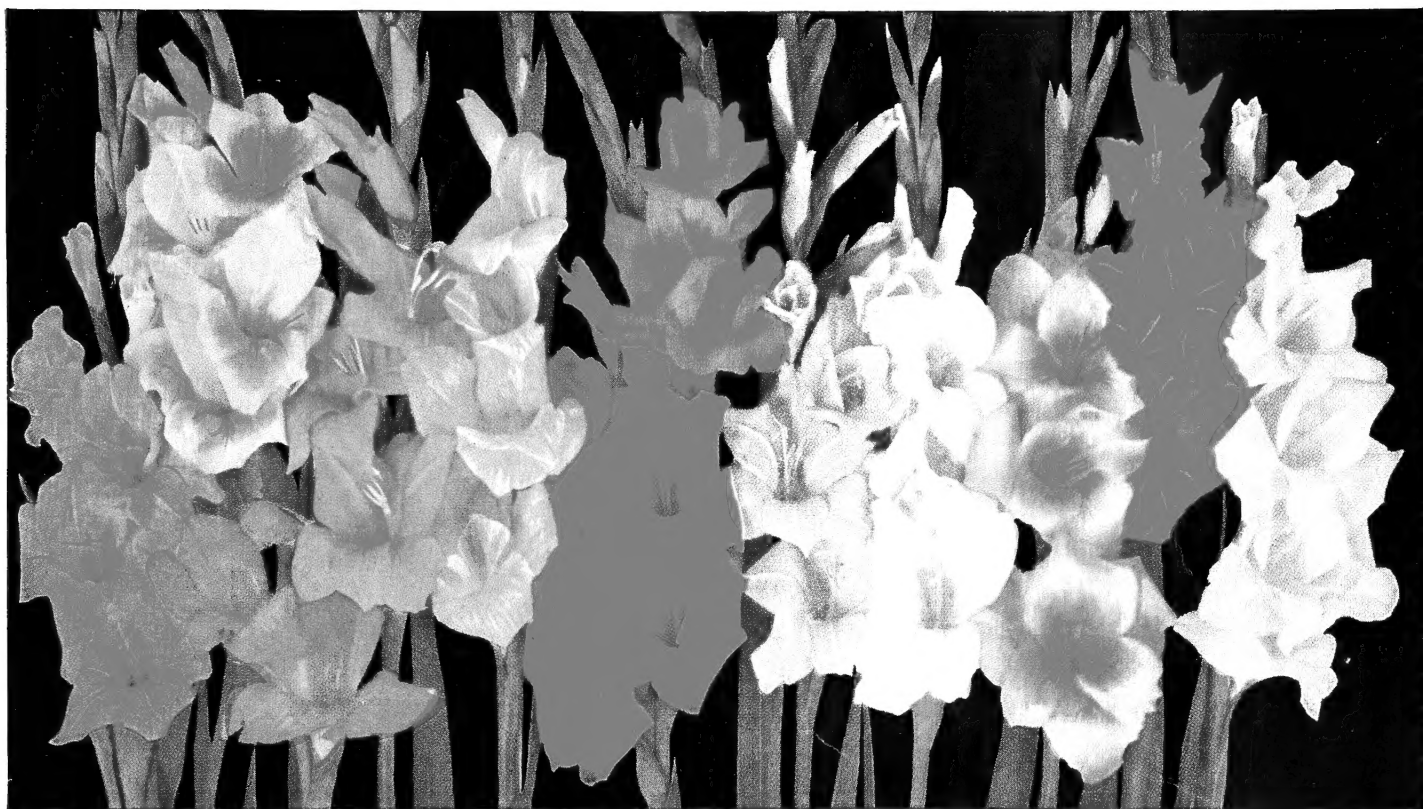
Total.....

NOTICE — Remittance by Postal Money Order is a guarantee against loss. We prefer them for our mutual protection. Use them if convenient.

WE GIVE NO WARRANTY, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, PRODUCTIVENESS OR ANY OTHER MATTER OF ANY SEEDS, BULBS, PLANTS OR TREES WE SEND OUT, AND WILL NOT BE IN ANY WAY RESPONSIBLE FOR THE CROP.

[illegible]

California Customers: Please add 2½ % to your order to cover STATE SALES TAX.



GLADIOLUS ARE MOST IMPRESSIVE IN EFFECTIVE COLOR BLENDS

Try Our Superb Rainbow Gladiolus Mixture

of popular named varieties in a perfect blending
of colors including ruffled and plain-petaled types.



TUBEROUS ROOTED BEGONIA—CAMELLIA TYPE

So easy to grow, so overwhelmingly
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The colorful TUBEROUS BEGONIAS are
worthy of a place in any flower-loving
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